STATE INSURANCE IN THE UNITED STATES

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BY

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To My Wife

PREFACE

One of the most interesting economic phenomena of recent decades has been the widespread and ever-expanding utilization of insurance in its manifold forms by the great masses of American people This tremendous development has been attended by the accumulation of vast assets which insurance companies, owing to the very nature of their business, must hold in order to meet future contingencies. Under such conditions, it is but natural that considerable legislative attention should have been focussed upon this institution.

Though insurance laws have been designed primarily to safeguard the rights of the public through the proper supervision and regulation of companies, they have not always been confined to this field In some cases, the state has been placed by statute in the position of an insurance carrier, either in competition with private companies, or to their exclusion. These statutes are of two general types. On the one hand are those measures which are framed particularly to protect the state or its political subdivisions against certain kinds of losses, or to provide pensions for faithful employees of the state or public school system, and which have given rise to the creation of public property insurance, public deposits guaranty, public official bonding, state employees' retirement and teachers' retirement funds On the other are laws intended to place the state in a position where it can sell to the public forms of insurance coverage that for the most part would otherwise have been procurable from private insurance companies. These have resulted in the establishment of workmen's compensation insurance, hail insurance, life insurance, Torrens title insurance and bank guaranty funds

The particular events leading to the enactment of the various laws differ quite widely, but the principal and underlying argument advanced in support of them has been that a state agency could furnish insurance and all its collateral services at a

greatly reduced cost by eliminating acquisition expenses, profits, and certain types of overhead burdens incident to a competitive régime.

Efforts to enact state fund legislation have at times provoked very heated controversies between advocates and opponents of governmental enterprise. This has been particularly true in the field of workmen's compensation though not necessarily confined thereto In many cases, advocates have been unversed in the knowledge of insurance principles and practices as well as obsessed with an unreasoned prejudice against private companies Too often their contentions, especially as to cost, have been unsupported by facts, or, at the best, only by such data as appear to warrant the conclusions Opponents, on the contrary, have frequently been motivated by purely selfish interests, and certain of them have upheld their position with no stronger argument than the constant repetition of the expression generally accredited to ex-President Harding that "there should be more business in government and less government in business" It is true that insurance companies, individually and through their associations, have endeavored to show the fallacies of state operation, but where a hostile attitude toward the institution of private insurance exists, their testimony has been discounted.

Without siding either with those who honestly believe, or because of possible political advantages, choose to believe, state insurance would produce the benefits claimed for it, or on the contrary, lending support to others who unqualifiedly condemn all such projects as an encroachment upon the realm of private enterprise, one might well inquire what the record shows for those states which have already attempted the experiment. Such an inquiry is by no means solely of academic significance, and assumes even greater practical importance when considered in relation to the numerous proposals for compulsory automobile liability insurance, which, during the past few years, have flooded our state legislatures

Although only one state has actually enacted such a law in its full form, the general public sentiment in favor of requiring

the motorist to guarantee the public against possible loss from the operation of his automobile appears to warrant the prediction that some day this legislation will be as common as are workmen's compensation laws now. If automobile insurance be made compulsory, it is reasonable to assume that the plea of those who support state compensation insurance funds on the grounds that "the state requires it, therefore the state should furnish it at cost," will again be heard, doubtless with even greater force, since the motorists affected would far outnumber the employers subject to workmen's compensation acts

It is unfortunate when legislation is hastily passed without adequate consideration of all its economic implications but doubly so when the valuable experience developed by other jurisdictions is completely ignored The writer felt that this problem was of sufficient importance to warrant a careful survey covering every type of insurance undertaken by the state In the course of his preliminary investigations he found that there was a vast amount of material available in states operating funds of one type or another, but that much of it was not readily obtainable by correspondence. To collect it, he visited 37 states and the District of Columbia, travelling nearly 20,000 miles and establishing personal contacts with state officials, insurance men and others interested in the subject This opportunity has enabled him to see local conditions surrounding various funds in a clearer light, as well as to obtain a better perspective of the whole problem The facts produced by the investigation, as well as the conclusions to which the data led, are presented in this volume

It is a privilege to acknowledge the unfailing inspiration and helpfulness of Dr. S S Huebner in the collection, presentation and revision of the material. Grateful recognition is likewise made to Dr. G. G Huebner, Mr. F. Robertson Jones, Dr. C K. Knight, Dr. C. A. Kulp, Dr. H. J Loman, Dr. S. H. Patterson, Dr. Robert Riegel, Mr. H P. Stellwagen, and Dr A H. Williams, all of whom read the manuscript and aided the author with suggestions and kindly criticisms. As the study is of an original character, the data were secured from manifold re-

ports, actuarial audits, addresses, pamphlets, interviews and miscellaneous material. It is manifestly impossible, therefore, to give detailed credit to every individual source of information The author has endeavored, however, in connection with the discussion of each type of fund, to acknowledge his indebtedness to those who so generously supplied the necessary data, and in copious footnotes to cite some of the more important publications which have a bearing upon this field of inquiry. The untiring efforts of the author's wife, and brother, William, have been of invaluable assistance in checking tables, preparing the manuscript and reading the proof.

To these many who have thus made possible the writing of this book is attributed whatever value it may have. They are in nowise responsible for any errors.

UNIVERSITY OF PENNSYLVANIA

DAVID McCAHAN

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CHAPTER I

NATURE AND DEVELOPMENT OF STATE INSURANCE IN THE UNITED STATES[1]

When the United States Supreme Court declared that insurance was not subject to national control under the interstate commerce clause of the federal Constitution, the insurance regulatory and supervisory powers of the various states became absolute This placed the state governments in a peculiarly strategic position to create and operate public insurance funds. Other governmental bodies have attempted similar experiments,[2] it is true, but those of the states are broader in scope and of greater significance It is with them that this study is concerned

Definition

Regardless of the name by which it happens to be called, a state insurance fund, as the term is herein used, means any fund, established and administered by the state, whose essential purpose is the assumption and distribution of risk.

[1] Various foreign nations have established governmental insurance enterprises, but no effort has been made to include their experience in this survey because a question may well be raised as to the wisdom of accepting such experience as a guide for American legislative action when it may have been developed under political and economic conditions differing from those prevailing in this country

[2] The federal government operates parcel post and registered mail insurance funds, a soldiers' and sailors' life insurance fund, a government employees' retirement fund and a pension fund for teachers in the District of Columbia It likewise pays compensation to its civil employees injured in performance of duty and to soldiers and sailors disabled in service. Insurance funds have not been created for these latter purposes, however, as payments are appropriated from current income. Porto Rico, a territory of the United States, operated a monopolistic compensation insurance fund which became so discredited among all interests that the Legislature, at its 1928 session, repealed the monopolistic feature so as to permit employers to become self-insurers or obtain coverage from private companies as well as from the state Many counties and municipalities also maintain insurance and pension funds, the former generally for bearing fire losses on public property and the latter for providing incomes to superannuated teachers, policemen, and firemen

Types of Funds

Ten principal types of state funds now existing in the United States fall within the scope of this definition. These are:

Workmen's Compensation Insurance Funds
Teachers' Pension Funds
State Employees' Pension Funds
Hail Insurance Funds
Bank Guaranty Funds
Public Deposits Guaranty Funds
Public Property Insurance Funds
Life Insurance Funds
Torrens Title Insurance Funds
Public Official Bonding Funds

Volume of Business

During the calendar year 1926, or fiscal period ending therein, the total premium receipts of all these funds was in excess of eighty-five million dollars, the bulk of that amount being received by the first two types named. Seven workmen's compensation, seven teachers' pension, and five other funds had premium receipts of more than a million dollars each, while the largest took in approximately thirteen million dollars. On the contrary, the income of many was practically negligible. A discussion of the factors which have a bearing upon the size and possible growth of these funds will be reserved for subsequent chapters pertaining to the different kinds of insurance.

Time of Adoption

What appears to have been the earliest form of state insurance fund in this country was the bank guaranty plan adopted in New York in 1829.[3] This provided for the assessment of member banks in order to create a fund for the payment of debts of insolvent banks The experiment was unsuccessful and the fund became bankrupt[4] A new banking law was

[3] Chapter 94—New York Session Laws—1829
[4] "On May 10, 1837, the New York City banks stopped payment in specie and the first day of January, 1838, found the banks of New York

passed in 1838 and there has been no statute of a like nature in the state since that time In 1831 a somewhat similar law was enacted in Vermont [5] which provided for an annual assessment on all state banks thereafter chartered. It is likewise of historical interest only, having been subsequently repealed.

The New Jersey Legislature created a state-wide teachers' pension fund in 1896 (superseded in 1919 by an actuarially sound system) and Torrens title funds were set up in the states of Illinois, California and Massachusetts in 1897 and 1898, but it was not until the twentieth century that activities of the state along insurance lines assumed any importance.

From 1900 to 1905, three Torrens title and four public property insurance funds came into being. Between 1906 and 1910, the bank guaranty fund was the most popular, four of the eight funds established in those years being designed to protect depositors in state banks against losses due to bank failures. The passage of workmen's compensation laws in many states during the years 1911–1915 resulted in thirteen compensation funds being created About the same time many legislatures faced the problem of providing public school teachers with pensions upon retirement for age or disability and ten bills setting up funds for that purpose became law A total of thirty-seven funds for these five years establishes a record for state entrance into the realm of insurance which has never since been equalled. But while the peak for the adoption of state fund laws was reached between 1911 and 1915, the succeeding five year period also witnessed considerable activity of the same character, twenty-seven new funds of various types being provided. Since then fewer funds have come into existence and a number have been rendered inoperative by repeal of the law, exhaustion of the fund or withdrawal of contributors. The trend in the enactment of insurance, pension, and guaranty fund laws may be seen by referring to the following table

in a state of suspension" First Deputy Supt—State Banking Dept.—Albany, New York

[5] H. J. Conant, State Librarian of Vermont.

TABLE I

Dates of Adoption

State Fund Laws

	Workmen's Compensation Funds	Teachers' Pension Funds	State Employees' Pension Funds	Hail Insurance Funds	Bank Guaranty Funds	Public Deposits Guaranty Funds	Public Property Insurance Funds	Life Insurance Funds	Torrens Title Insurance Funds	Public Official Bonding Funds	Totals
Before 1905		1			.		4		6		11
1906–1910		1			4[b]		.	1	2		8
1911–1915	13	10	1	1	2		4[d]	1	4	1	37
1916–1920	3	6	1	4[a]	2[c]		3[e]	.	7	1	27
1921–1925	1	2	2			2	3			.	10
Totals	17	20	4	5	8	2	14	2	19[f]	2	93[g]

a Oklahoma hail insurance law was repealed in 1925.
b Oklahoma and Texas bank guaranty laws were repealed in 1923 and 1927 respectively
c Washington bank guaranty fund is now inoperative, all member banks having withdrawn
d New Jersey fire insurance fund is not yet in operation Michigan and Minnesota funds are exhausted.
e. Vermont fire insurance fund is not yet in operation.
f Many of these funds are inoperative.
g. Illinois State Institution's Teachers' Pension and Retirement Fund, and Wisconsin Dog-Bite Insurance Fund are not included
Note.—Arizona and Rhode Island have teachers' pension laws, but since they are non-contributory and do not provide for the creation of funds, they have been omitted from the tabulation. Connecticut and Maine have state employees' pension laws which have been excluded for the same reason
Data for this table supplied by various state officials.

Recent Legislative Efforts

Notwithstanding the fact that fewer funds were initiated between 1921 and 1925 than during either of the two preceding five year periods, there was, nevertheless, much agitation for state insurance. This manifested itself especially with respect to workmen's compensation.[6] It is significant that even though

[6] "Excerpt from letter of December 13, 1926, received from F. Robertson Jones, Secretary-Treasurer, Workmen's Compensation Publicity Bureau, 75 Maiden Lane, New York City

"During the years 1921–1926, inclusive, bills to create monopolistic state workmen's compensation insurance funds have, according to our records,

forty-three states now have workmen's compensation laws, only seventeen provide [7] state funds to carry the risk All of these funds with the exception of those in California [8] and Arizona [9] were set up by the original compensation acts and fifteen of them were created prior to 1917. To express it in another way, while there has been an active effort exerted to establish additional compensation funds, Arizona (a mining state) and North Dakota (a state in which the Non-Partisan League has

been introduced and subsequently defeated in the following states and territories.

Alaska—1921 and 1923
Arizona—1921
Connecticut—1921
District of Columbia—66th, 67th, 68th, and 69th (bill pending) Congresses
Florida—1921 and 1925
Georgia—1922
Illinois—1921 and 1925
Kansas—1921
Kentucky—1922
Maine—1921
Massachusetts—1922, 1923 (2 bills), 1924 (2 bills), 1925 and 1926 (2 bills)
Minnesota—1921 and 1923
Missouri—1921, 1923, 1924 and 1926
Nebraska—1925
New Jersey—1921
Wisconsin—1923 and 1925

"During the same years bills to create such monopolistic state funds where competitive state funds already existed were introduced and subsequently defeated in the various states as follows

Idaho—1921
Maryland—1924
Montana—1921 and 1923
New York—1921, 1922, 1923 (2 bills), 1924, 1925 and 1926
Utah—1923

"Furthermore, in 1925 bills to create competitive state funds were introduced in Arizona and Illinois—the Arizona bill of that year being enacted and now in effect and the Illinois bill being defeated"

During the year 1927, bills to create state fund monopolies of workmen's compensation insurance were introduced and defeated in Kansas, Massachusetts, Missouri, Nebraska, New York, Wisconsin and the United States Congress

[7] By an amendment to the compensation law (1923), the state of Tennessee provided that a competitive state fund might be organized for the coal mining industry on condition that employers representing seventy-five per cent of the total tonnage produced in the state for the preceding year agree to become members Since the requisite number of employers have not complied with this provision, the fund has never been placed in operation.

[8] The original California Act (Chapter 399, Laws of 1911) was elective and when it was made compulsory (Chapter 176, Laws of 1913) a competitive fund was created

[9] Employers were not required to insure their compensation risks under the original Arizona Act (Chapter 14, Laws of 1912) but when the law was revised and insurance made compulsory (Chapter 82, Laws of 1925) a competitive fund was created

inaugurated many and varied forms of publicly owned and operated business enterprises) are the only two that have embarked in the compensation insurance business since the relative merits of the different types of compensation insurance carriers have become fairly well settled

The possibility of state funds in connection with proposed compulsory automobile insurance legislation[10] has also received considerable attention within the past few years. It is difficult to understand how a state could write liability insurance since the very nature of that type of coverage would place a governing body in the position of defending one citizen against another. For that reason it is logical to assume that the fund (were it to adhere rigidly to the principle of making settlements only on the basis of actual liability) would either become so unpopular with the public as to lead to its elimination, or the law would be amended to provide for compensation to every person injured by an automobile, regardless of negligence, as suggested by Judge Marx of Ohio. This, of course, raises a question as to the desirability of such automobile legislation, irrespective of whether the insurance provided for by it is to be written by private carriers, or by the state That is a big problem in itself and one not within the scope of this volume since our inquiry is limited to a study of the state as an insurance carrier and is not concerned with the merits or demerits of any particular form of social insurance legislation. As has been well demonstrated in the case of workmen's compensation, the value or success of a social insurance measure is by no means dependent upon the entry of the state into the insurance business.

[10] The Massachusetts Financial Responsibility Law, effective January 1, 1927 and the Connecticut Law (applicable only to those who have caused at least $100 damage either to person or property by the operation of an automobile) do not establish state funds, though a liability insurance policy may be offered in both states as evidence of financial responsibility.

Maine, Minnesota, Rhode Island and Vermont adopted in 1927 measures modelled after that of Connecticut New Hampshire likewise passed a Financial Responsibility Act in that year Twenty-four other of the forty-five legislative bodies which met in 1927 failed to enact compulsory liability insurance legislation which was introduced A number of these bills would have provided for insurance in a monopolistic state fund.

Distribution by States

The western and middle western states have been more prone to undertake certain kinds of competitive insurance activities than those in the east or south. Thus, we find eleven of the seventeen compensation, seven of the eight bank guaranty, all of the hail, both of the bonding, nine of the Torrens title, six of the fire and six of the teachers' pension funds have been established in states west of the Mississippi River. The only type of fund which might be regarded as predominantly eastern is that providing a retirement pension to public school teachers or state employees, but as will be brought out in the chapter on "Pensions," the factors involved therein are of a somewhat different character For the benefit of those who may wish to see the distribution by states, this information is presented graphically in map form, together with the dates on which the laws creating the original funds were enacted

Description, Operation and Results

The nature of the coverages provided by various funds and the circumstances underlying their adoption are so dissimilar as to render unsatisfactory any attempt to discuss them jointly with respect to administration, methods of operation, cost, benefits, services and financial solvency To avoid duplication, however, funds having like distinguishing characteristics have been grouped together in the following chapters.

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CHAPTER II

WORKMEN'S COMPENSATION FUNDS [1]

INTRODUCTION

Until the early part of the twentieth century a workman injured in industry had no recourse against his employer for damages unless he could prove the latter had not exercised proper care to engage suitable servants and provide adequate

[1] The material contained in this and the following chapters with respect to workmen's compensation insurance funds is based largely upon information supplied to the writer in personal interviews with the following officials of the various funds, to whom acknowledgment is gratefully made.

Monopolistic

Nevada—Dan Sullivan, Chairman, Nevada Industrial Commission, Carson City

North Dakota—J A. Kitchen, Commissioner, Department of Agriculture and Labor, Bismarck

Ohio—T P Casey, Chairman, Ohio Industrial Commission; T. P. Kearns, Superintendent, Division of Safety and Hygiene; and L W. Fisher, Asst. Actuary, Ohio Industrial Commission, Columbus

Oregon—D A Elkins and W A Marshall, Commissioners, Industrial Accident Commission, Salem, H L Bown, Director of Vocational Rehabilitation, Industrial Accident Commission, Portland

Washington—Claire Bowman, Director, John Shaughnessy, Supervisor of Industrial Insurance, and Martin J Flyzik, Supervisor of Safety Division, all of the Department of Labor and Industries, Olympia

West Virginia—J E Brown, Secretary, and J W Smiley, Actuary, State Compensation Fund, Charleston

Wyoming—Arthur W. Calverley, Manager, Workmen's Compensation Department, Cheyenne

Competitive

Arizona—R B Sims and B H. Clingan, Commissioners, Arizona Industrial Commission, Phoenix

California—C. B Morris, Asst Manager; A. H Mowbray, Consulting Actuary, and H. C. Miller, Comptroller, State Compensation Insurance Fund, San Francisco. Also Claude W. Fellows, Former Manager of the Fund, and L H. Mueller

Colorado—H W Redding, Asst. Manager, State Compensation Insurance Fund, Denver

Idaho—W D. Yager, Manager, Idaho State Insurance Fund, Boise

Maryland—James E Green, Jr, Superintendent, Maryland State Accident Fund, Baltimore

Michigan—K F. Berger, Asst. Manager, State Accident Fund, Lansing

Montana—W B McLaughlin, Secretary, Montana Industrial Accident Board, Helena

Pennsylvania—R H Lansburgh, Secretary of Labor and Industry; Gabriel H Moyer, Manager (Jan 1924-Aug. 1926); George W. Van Wagner, Statistician, A. B Hitchcock, Chief of Field Force; and

safeguards, and moreover, that his failure so to do had resulted in the injury sustained. The employee's right to recover was further subject to certain defenses—as the fellow-servant, assumption of risk, and contributory negligence doctrines—which were available to his employer This system, which placed the burden of proof upon the person injured, and prevented him from securing an award unless he could show negligence on the part of the employer, was far from satisfactory to either of the affected parties or the general public. From an economic viewpoint, it went but a short way toward alleviating the distresses of those who were injured, or aiding the families of the ones killed

Progressive thinkers recognized that industrial operations were subject to certain inherent hazards owing to which an accident, using the term in its truest sense, could happen without negligence by either party, and concluded that indemnification for its resultant loss should be regarded as one of the costs of doing business This led to the adoption of workmen's compensation legislation. Its underlying principle is that employers engaged in certain types of industry shall pay for all industrial injuries (unless they are caused by intoxication or are willfully self-inflicted) according to a definite schedule, without regard to fault Since 1911, forty-three states [2] have enacted such laws. In twelve states, compensation is compulsory for some or all private employments affected, while in thirty-one it is elective. Most states make it compulsory as

F I De Haven, Chief Underwriter, of the State Workmen's Insurance Fund, Harrisburg

New York—Chas G Smith, Manager, State Insurance Fund, New York City

Utah—Chas A Caine, Manager, State Insurance Fund, Salt Lake City

The information supplied by the foregoing officials has been supplemented by correspondence with them and other fund executives as well as by annual reports of funds and industrial commissions, actuarial audits and miscellaneous material of various kinds Interviews were also held with leading insurance men and with the commissioners of insurance in most states having compensation funds Where more direct references are warranted, they will appear in supplementary footnotes.

[2] Arkansas, Florida, Mississippi, North Carolina and South Carolina are the only jurisdictions still entirely under the employers' liability system. A compensation law applying to the District of Columbia became effective July 1, 1928 The Federal Longshoremen's and Harbor Workers' Compensation Act went into effect a year previous

to public employments Even where the employer apparently is given an option as to whether he shall accept the act, he is for all practical purposes forced to elect it, as otherwise he would be deprived of the right to use the various defenses, referred to above, in case suits are brought against him under the common law

If a workmen's compensation act is to afford the maximum protection to workers, it is essential that they be definitely guaranteed the payment of the benefits promised. Accordingly, forty-one states [3] require the employer to carry insurance, provide security, or establish his financial responsibility. Since the obligation to pay compensation benefits is placed directly upon the employer, the insuring of his risk, except in the monopolistic fund states, will not ordinarily relieve him from liability if the carrier should become insolvent.[4]

[3] Alabama and Kansas are the exceptions.

[4] "In general, employers are not relieved of liability to pay compensation claims by insurance. California, where insurance as prescribed by the Act relieves the employer of liability, is an exception Insurance in the competing state funds of New York and of Pennsylvania, and in the exclusive state funds of North Dakota, Ohio, Oregon, Washington, West Virginia and Wyoming also constitutes a relief from all liability under the Compensation Act It should be noted that most employers are subject to continuing membership in exclusive state funds, so that they will eventually make up any deficiencies which may occur" Workmen's Compensation in the United States, by Ralph H. Blanchard, 1926, p 59.

Author's Note—Under the Arizona Workmen's Compensation Act of 1925, employers and insurance carriers are not relieved from liability but injured workers may collect from the state fund even though their employers were not insured with it This appears to be the only competitive fund act having such a provision It reads "In the event that the employer or the carrier of insurance shall not fully comply with the provisions of this Act relating to the payment of insurance and the lawful orders of the commission, then the claim of the injured employee, or in the event of his death, that of his legal successors entitled, shall be deemed to be assigned to the Arizona Industrial Commission for the benefit of the State Compensation Fund, and the Arizona Industrial Commission shall pay to the said injured employee, or in the event of his death to his legal successors entitled, such benefits or amounts as may be due under the provisions of this Act, and the Arizona Industrial Commission shall have a cause of action against said employer and against said insurance carrier for the amount so paid, " Section 52, chapter 83, Laws of 1925

As respects the right of injured workers to collect compensation benefits in monopolistic fund states when employers have not been insured by the fund, it is interesting to note they are protected in Washington and Wyoming whether or not the employer has complied with the law. This is not so in the other monopolistic fund states In Nevada, Oregon and West Virginia, the workman may bring suit against the employer under the liability law with the usual defenses of the employer removed, but has no recourse against the state The commission in North Dakota may make

Seven states—Nevada, North Dakota, Ohio, Oregon, Washington, West Virginia and Wyoming—have created what are known as monopolistic or exclusive state funds Although the bulk of the compensation business is handled by these carriers, employers are permitted to become self-insurers in Ohio, Oregon and West Virginia upon meeting certain standards of solvency,[5] while in Nevada, Oregon and West Virginia they may elect not to come under the compensation act, and then protect themselves against loss by carrying employers' liability insurance The removal of the common law defenses, forfeited by rejection of the act, would appear to preclude the possibility of employers exercising this option. This is substantially the case in Nevada and West Virginia. In Oregon, however, it is claimed that approximately 25,000 workers (mostly employed in large saw mills—a particularly hazardous occupation) are outside the provisions of the act as compared with 70,000 who are covered by it, because employers of the former choose to carry liability insurance Self-insurance appears to be relatively unimportant there, however, as it is estimated that only about 1250 persons come under the plan.

Ten other states—Arizona, California, Colorado, Idaho, Maryland, Michigan, Montana, New York, Pennsylvania, and Utah—grant employers the option of protecting workmen's compensation risks with a fund operated by the state, becoming self-insurers or taking insurance with private companies Three types of private carriers are ordinarily recognized; namely, stock companies, mutual companies, and reciprocals.

Comparative Importance of Funds and Private Carriers

From the very beginning of compensation in this country, state funds have written a substantial portion of the business This is in part due to the complete monopoly they enjoy in the seven states previously named and to the partial monopoly they

an award which must be paid by the employer, while in Ohio, if the employee chooses, he may bring claim for compensation instead of liability and the commission will make the award which is then payable by the employer with a 50 per cent penalty

[5] Self-insurers in Ohio must also pay to the state fund 2 per cent of the premium they would have been assessed if insured therein

TABLE II

WORKMEN'S COMPENSATION
PREMIUM INCOME
1917–1926

Years	Stock Companies	Mutual Companies	Monopolistic Funds	Competitive Funds	Total	Ratio of State Funds to Total
1917	$ 64,640,671	$11,631,580	$11,765,376	$ 6,134,229	$ 94,171,856	19.0
1918	94,861,458	18,972,286	18,616,419	9,384,105	141,834,268	19.7
1919	102,918,134	20,422,567	20,508,486	10,377,830	154,227,017	20.0
1920	119,788,048	40,116,653	24,335,416	13,218,064	197,458,181	19.0
1921	106,294,584	30,971,989	25,380,442	11,715,814	174,362,829	21.3
1922	89,693,393	28,454,563	16,684,322	10,861,419	145,693,697	18.9
1923	105,813,599	36,674,349	19,848,971	13,306,222	175,643,141	18.9
1924	124,052,416	37,803,688	21,364,777	14,048,808	197,269,689	17.9
1925	137,120,735	38,572,881	21,292,829	14,990,207	211,976,652	17.1
1926	154,789,057	44,709,738	24,281,385	18,978,826	242,759,006	17.8

Data for stock companies and for the 1925 and 1926 premiums of mutual companies supplied by A. M Best Co Other mutual figures furnished by J. M. Eaton, Secretary, National Association of Mutual Casualty Companies State fund statistics obtained from state reports or officials of the respective funds.

have in California, Colorado, Idaho, Montana and Utah, where all insurance on public employments and contracts on public works must be placed with the state. A relative idea of the part they play in workmen's compensation insurance, as compared with private agencies, may best be obtained by a comparison of the premium receipts of the different types of carriers for the past ten years, presented in Table II.

Were the receipts of reciprocals and self-insurers included in the foregoing table, it is obvious the fund percentages would be smaller. Unfortunately, these figures are not available. On the other hand, mention should be made of the fact that the manual rates charged by state funds are lower than those of private companies in some competitive states,[6] and are said to be lower than those for which private companies could handle the business in monopolistic states.

Although it is instructive to observe the relative position of state funds as a whole, this gives no clue as to the tendency on the part of employers to make use of them when allowed an option in the matter, for we have noted that employers are prohibited in some states from insuring with private companies, whereas in others, where no fund is in existence, they have no alternative, except to become self-insurers. Any statistics designed to show the comparative importance of state funds in competition with private agencies must of necessity therefore be confined to those ten states where either form of protection may be secured.[7] Table III presents for each of these jurisdictions the amount of compensation premiums received by the fund during 1926, the amount written in that state by private carriers, the total of both, and the ratios of each to the total. It is supplemented by Table IV which gives similar ratios between the premiums received by state funds and all carriers combined for each of the past ten years, thus permitting an analysis of the fluctuations.

[6] The New York fund, for example, grants a 15 per cent, and the Utah fund a 20 per cent differential Thus, even though the same rating manual is used by both the fund and private carriers in each state, the premium received by the fund is lower by the amount of the differential

[7] Here again it is necessary to note that competition is not quite free in California, Colorado, Idaho, Montana and Utah, the state having a partial monopoly as previously mentioned.

TABLE III

COMPARISON OF PREMIUM INCOME FOR 1926—COMPETITIVE STATE FUNDS AND PRIVATE COMPANIES

State	Premiums Received			Per cent of Total Received	
	State Funds	Private Carriers	Total	State Funds	Private Carriers
California	$ 6,012,684	$14,203,819	$ 20,216,503	29.7	70.3
Colorado	605,631	1,380,151	1,985,782	30.5	69.5
Idaho	326,489	515,031	841,520	38.8	61.2
Maryland	349,196	2,999,115	3,348,311	11.6	88.4
Michigan	480,290	8,588,457	9,068,747	5.3	94.7
Montana	242,901	217,774	460,675	52.7	47.3
New York	6,949,772	57,479,970	64,429,742	10.8	89.2
Pennsylvania	3,687,999	12,921,572	16,609,571	22.2	77.8
Utah	323,864	781,992	1,105,856	29.3	70.7
	18,978,826	99,087,881	118,066,707	16.1	83.9

TABLE IV

RATIOS OF PREMIUMS RECEIVED BY COMPETITIVE STATE FUNDS TO TOTAL COMPENSATION RECEIPTS OF ALL CARRIERS IN THE STATE
1917–1926

State	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926
California	24.0	28.7	33.4	34.1	36.9	33.7	31.0	30.1	30.1	29.7
Colorado	16.5	23.4	19.1	24.6	21.2	25.9	27.4	25.6	28.6	30.5
Idaho				.	.	49.4	53.2	37.8	37.3	38.8
Maryland	8.4	7.3	7.7	8.2	9.8	8.6	15.6	8.8	9.9	11.6
Michigan	4.6	4.7	9.0	4.7	4.7	6.3	5.4	6.5	6.3	5.3
Montana	12.4	36.7	48.9	55.4	58.4	61.8	58.2	44.8	58.8	52.7
New York	12.1	12.2	10.6	8.7	7.9	7.4	7.8	8.3	7.7	10.8
Pennsylvania	12.3		13.2	17.8	14.0	25.6	21.4	17.6	18.5	22.2
Utah	. .		20.7	23.8	26.2	30.7	33.1	34.2	28.7	29.3

Private carrier figures used in computing the above ratios were obtained from the Spectator Insurance Yearbooks for the years 1917 to 1926 inclusive, while those for the state funds were secured from the funds themselves.

When studying the plans of operations and activities of various funds, it will be helpful to have in mind their relative size. The best gauge of this is the premium income Table III shows the 1926 premium receipts for the competitive funds while those for the monopolistic carriers are set forth in Table V.

TABLE V

PREMIUM INCOME DURING 1926

Monopolistic State Compensation Funds

Nevada	$ 408,659
North Dakota	445,526
Ohio	12,675,957
Oregon	2,529,837
Washington	3,601,084
West Virginia	4,185,875
Wyoming	434,447
	$24,281,385

NATURE OF COVERAGE

Private insurance companies, in writing workmen's compensation coverage, generally make use of a uniform contract known as the "Standard Workmen's Compensation and Employers' Liability Policy" This is adapted to the requirements of each particular state law by special endorsements attached thereto In addition to assuming the employer's obligations as imposed by the compensation legislation of his state, the insurer likewise undertakes to defend damage suits brought by injured workmen and to pay any awards which may arise therefrom This latter provision is valuable to the employer in case suits are brought by employees who do not come within the scope of the compensation law, such as persons who may have rejected the benefits of the act or who may be engaged in an excluded occupation or in foreign or interstate commerce

One of the principal criticisms directed against state funds is their failure usually to cover this residual liability of the employer. Thus, we find that no provisions regarding it appear in the contract forms used by the Idaho, Maryland, Michigan and Utah funds, while the Montana competitive and the Nevada, North Dakota, Ohio, Oregon, Washington, West Virginia and Wyoming monopolistic funds (which do not issue policies to their subscribers) do not assume such liability in practice Clauses in the policies of the Arizona, California and Pennsylvania funds promise to defend damage suits and pay the costs of any legal proceedings, but make no reference

to any awards that might arise therefrom An endorsement assuming the latter liability, within the limits of $10,000 for one person and $20,000 for an accident, may however be secured in Arizona at an increase of three per cent in the premium The Colorado and New York funds specifically agree to defend damage suits and pay awards in the same manner as do private carriers. Although the officials of several funds assert such a provision is unnecessary in their states to safeguard the policyholder, nevertheless, to the extent that they fail to underwrite this residual liability, their coverage lacks completeness and is not comparable to the protection afforded by private insurers.

Other Factors to be Considered

In the following chapters, state compensation insurance funds will be further treated from four principal angles, (1) system of administration, (2) functions performed, (accident prevention, payment of benefits, medical service and rehabilitation), (3) financial stability, and (4) cost. The problem of cost, upon which so much emphasis is ordinarily placed, has been purposely left until last because the other factors listed play a very prominent part in its determination.

CHAPTER III

WORKMEN'S COMPENSATION FUNDS

ADMINISTRATION

Irrespective of the type of insurance carrier, the inherent nature of workmen's compensation legislation usually has brought about the creation of a special body which is charged with the administration of the law and the review of settlements under it in order to relieve the courts of that burden and likewise assure to injured employees an equitable and speedy dispensation of justice. In the majority of states this is entrusted to a specially created commission, board, bureau or commissioner The agency thus established, or its employees, holds hearings, conducts investigations, approves awards and carries on other activities in furtherance of the above aim.

A state insurance fund is similarly placed in charge of a single official or commission who is responsible for its proper management and whose primary duty is to assume the risk which, by reason of the compensation law, has been put upon employers. The intelligent performance of this function naturally involves a knowledge of insurance underwriting and adjusting in order that risks may be properly classified, that adequate and equitable premiums may be charged, that every incentive may be offered for the reduction of accident severity and frequency, that just claims may be paid expeditiously, and that miscellaneous services may be rendered which will tend to carry out the intent of the law.

The systems of (1) administering the law and (2) administering the fund, in the states where a fund exists, are set forth in the following table. The terms of office and salaries of the various administrative officials are presented therewith, since subsequent reference will be made to them.

TABLE VI

WORKMEN'S COMPENSATION LAW AND FUND ADMINISTRATION
1926

State	Of Law: Type of Body	No of Members	Term in Years	Salary	Of Fund
Monopolistic					
Nevada	Industrial Commission	3	4	$4,000 1,800	Same
North Dakota	Workmen's Compensation Bureau	5[a]	6[b]	2,500	Same
Ohio	Industrial Commission	3	6[b]	5,000	Same
Oregon	Industrial Accident Commission	3	4[b]	3,600	Same
Washington	Director, Dept of Labor and Industries	1	4	6,000	Same
West Virginia	Compensation Commissioner	1	6	6,000	Same
Wyoming	Courts and State Treasurer	—	—	—	State Treasurer
Competitive					
Arizona	Industrial Commission	3	6[b]	5,000	Same
California	Industrial Commission	3	4[b]	5,000	Manager appointed by Commission
Colorado	Industrial Commission	3	6[b]	4,000	Manager appointed by Commission
Idaho	Industrial Accident Board	3	6[b]	3,000	Manager appointed by Governor
Maryland	Industrial Accident Commission	3	6[b]	5,000	Superintendent appointed by Commission
Michigan	Dept. of Labor and Industry	4	[c]	5,000	Manager appointed by State Administrative Board and Advisory Board
Montana	Industrial Accident Board	3[a]	4	5,000	Same
New York	Industrial Board appointed by Governor	3	6[b]	8,000	Manager under civil service
Pennsylvania	Workmen's Compensation Board	3	5[b]	9,000 8,500	Manager appointed by State Workmen's Insurance Board
Utah	Industrial Commission	3	6[b]	4,000	Manager appointed by Industrial Commission

[a] Two of these are ex-officio members
[b] The term of each member expires at a different time, thus leaving the others with some experience.
[c] Each member serves until his successor is appointed and has qualified.

A System of Dual Functions

A study of the foregoing table will reveal at once the dual character of the functions performed[1] by many of the officials charged with the enforcement of the compensation act Thus, they serve as both judge and insurer in six of the monopolistic states and as both judge and competitor in six of the competitive, either through direct operation of the fund, or appointment of its manager At one time, the same situation existed in New York, but following the Connor investigation and report, these two offices were divorced. In Pennsylvania, the Secretary of Labor and Industry, by virtue of holding the chairmanship of the State Workmen's Insurance Board, is associated with the administration of the fund, while by reason of his ex-officio membership in the Workmen's Compensation Board, the enforcement of the act also comes within his jurisdiction. The most complete division of authority appears to exist in Idaho, Michigan, New York and Wyoming, though it is of interest to observe that efforts have recently been exerted by state fund supporters in Michigan to transfer the Accident Fund to the Department of Labor and Industry

Reflection upon the exercise of two such dissimilar functions by the same body gives rise to certain questions of practical importance

1 Will the political formation of a commission or other administrative body, and the customary lack of insurance training on the part of its members, have any bearing upon the conception they hold of their respective duties in the operation of a fund, and in the type of personnel they are enabled to attract to it?

2. Will the effort to make a good showing, and thus to gain political favor with the public, present an incentive for this body, in its capacity as judge, to become liberal in the application of the law, either to all or to individual claimants, because it can prevent the case from being carried on appeal to the courts? Or, on the contrary, will its efforts to keep down the

[1] Some of these commissions may have still other powers such as the administration of labor, safety and minimum-wage laws

costs to employers, governed by a desire to have the fund perpetuated, tend to make it illiberal?

3 Will the fact there is no direct check upon most funds by another official body, and no indirect check in those states where the rivalry of competition is eliminated, have a tendency to affect the handling of claims, accident prevention efforts and other services which should rightfully be carried on?

The interaction of these two functions led the Special Massachusetts Commission, appointed in 1926 to investigate the operation of the Workmen's Compensation Law, to the following conclusion: [2]

> "However, there is one reason which we believe to be sufficient in itself to prove the undesirability of giving up our present system (private competition) in favor of the so-called Ohio plan (monopolistic state fund) The Board or Commission which manages a monopoly of the insurance and at the same time hears and adjudicates claims, tends to be less liberal in its settlements, more technical in denying compensation, more narrow in its determination of injury, and on the whole less favorable and sympathetic to the employee.
>
> "This tendency seems to be simply the natural and inevitable result of making the same Board or Commission both judge and insurer It alone represents the employer at its hearings. It alone holds and administers the employer's funds It naturally finds itself forced to take the employer's part and argue his case
>
> "Indeed, putting the whole business of insurance in the hands of the tribunal which adjudicates the claims would differ less than one would suppose from giving to the insurance companies the function of hearing and determining all the claims against themselves. In either case these two incompatible functions would be equally in the same hands."

In discussing this same point (in his book on Compensation Insurance),[3] the late Dr. E H. Downey, Compensation Actuary of the Insurance Department of Pennsylvania and of the Pennsylvania Compensation Rating and Inspection Bureau, who had a very intimate knowledge of state fund problems and who participated with Miles M. Dawson in making the 1919 Actuarial Audit of the Ohio Fund, said:

[2] Report of Special Commission appointed under Chapter 36 of the Resolves of 1926 to Investigate the Operation of the Workmen's Compensation Law—House Report No. 999, 1927, pages 26 and 27.

[3] Workmen's Compensation, by E H Downey (1924), pages 103 and 104.

"The actual administrators of state funds are too apt to regard themselves as trustees for the insurants rather than the beneficiaries and to look to low premium rates rather than liberal settlements as the goal of endeavor Claim adjusters, by whomever employed and whatever their antecedents, take to claim shaving as the sparks fly upward Even the liberally minded Industrial Commission of Ohio developed a needlessly elaborate claim procedure and permitted its claim division to suspend payment in hundreds of cases of continued disability. . . .

"The root causes of ineffective claim administration are two: insufficient appropriation and the vesting of insurance management in the very same commission which has to pass upon disputes between the insurer and its claimants. As manager of the fund the commissioners and their subordinates owe an obvious duty to the insured employee; in their capacity of adjudicators they are bound to apply the law impartially as against themselves The whole procedure smacks too much of allowing one of the parties in interest to act as judge of the dispute It is much to their credit that many commissioners have discharged these dual functions without incurring reproach, but the functions are at best incompatible"

Experience has thus demonstrated the validity of the principle set forth in a note appended to the "Uniform Workmen's Compensation Act, Approved by Conference of Commissioners on Uniform State Laws and Recommended for Adoption in All the States—October, 1914," namely,

"It is important that the State insurance fund should not be administered by the Industrial Accident Board or by any one appointed by it That Board is largely a judicial body, and cannot properly act as a party defendant and also as the court which is to decide the case."

Still another view of this same problem is expressed by a San Francisco attorney [4] who handles many claims every year before the Industrial Accident Commission of California In a letter to the author he points out how an injured workman with a just claim, but ignorant of his rights and the scheme of operation, may suffer because he assumes that final action has been taken in his case when he receives an official written rejection from the state board or commission administering the fund. Unless he subsequently learns of his privilege to appeal, he may be discouraged from taking further action to establish his claim

It is evident that the lack of proper checks and balances

[4] R P. Wisecarver, Attorney at Law, San Francisco, California.

under this two-fold administrative plan gives rise to possible dangers. An accurate determination, though, of the extent to which abuses have crept in, is difficult If officials in charge of a fund are swayed in their decisions, they can hardly be expected to publish the fact, though frequently they are the only ones who have the information. Insurance men who might be in a position to cite certain specific instances which have come to their attention are disinclined to do so publicly, if the companies they represent are writing compensation in the state, for fear of prejudicing whatever claims they have, or expect to have, before the administrative body Of course, a multitude of claimants could be interviewed, and the merits of each award or decision carefully weighed, but this is a stupendous if not an impossible task Even without the information which might be uncovered by such an investigation, however, the conclusion is well-nigh inescapable If forces are at work which tend to hinder the body administering the compensation law from performing its services as equitably and efficiently as would be the case if it were not also responsible for the fund's success, then the two functions should be separated, and assigned to different bodies

But even this division could improve the situation but little if the two resultant agencies were under rigid political control. It is true that commissioners not in sympathy with state insurance might be appointed to administer the law, who would show no discrimination between the state fund and private carriers where both are permitted to operate, and who would set a high standard for the fund to maintain in the states where it is exclusive So long as politics, however, looms up so prominently in the designation of these various officials, it is obvious that the advantages of separation may be more apparent than real, especially when funds are monopolistic. Where competitive, the pressure of private competition, serving to disclose irregularities, would doubtless aid in forcing the administrative body to keep all carriers (state or private) on the same plane.

Conceding a division of functions which would preclude the

possible interactions just discussed, there yet remains unanswered the query as to the merits of state insurance with respect to workmen's compensation risks The various factors entering into an analysis of this description are set forth in the following pages, though, in some cases, it will be noted that a dual administrative system, as well as state operation per se, has contributed to bring about a given set of conditions. The relative influence of each, however, may be impossible of exact measurement.

EFFECTS OF POLITICAL INFLUENCE

An investigation of the influences which politics has exerted upon state fund operations concerns itself primarily with the drawbacks incident to frequent changes in office, to administration by officials unfamiliar with insurance underwriting, to the spoils system for appointive positions, and to possible legislative handicaps That such shortcomings exist does not warrant the inference that political management is controlled by sinister or corrupt forces since the conditions enumerated may be encountered even where all officials are thoroughly honest and actuated by the highest motives.

Changes in Administration

In states where the members of an industrial board or commission are the functioning executives of the insurance fund, the term of office [5] varies between four and six years but ordinarily each member's term expires at a different time, thus leaving at least two with some experience All commissioners in these states are appointees and not subject to civil service. When the fund is operated by a manager or superintendent, regardless of how appointed, the law usually contains no provision as to his term of office From this and other facts available, it may be assumed such executives occupy their positions only during the pleasure of the appointing power. Except in New York, the office is not subject to civil service requirements. It is small wonder, then, that appointees, for the most part, have lacked previous insurance experience, and that there

[5] See Table VI

has been a very large turnover among them A table indicating the number of persons in each state who have exercised administrative control of the fund during its entire existence is inserted herewith For purposes of comparison this has been divided into two sections. In one, control rests solely in the hands of a commission, whereas in the other it is entrusted to a single individual who may either be subject to a commission or entirely independent of it

TABLE VII

TURNOVER AMONG ADMINISTRATORS OF STATE FUNDS

Name of State	Year Fund Began Operations	Regular Stated Number of Officials	Number of Persons Who Have Held Office
Fund administered by board or commission of more than one member			
Arizona	1926	3	3
Nevada	1911	3	11
North Dakota	1919	3[a]	9
Ohio	1912	3	9
Oregon	1914	3	8
Fund administered by a manager or other individual			
California	1913	1	2
Colorado	1915	1	3
Idaho	1918	1	5
Maryland	1914	1	5
Michigan	1912	1	3
Montana	1915	1[a]	2
New York	1914	1	3
Pennsylvania	1916	1	5
Utah	1917	1	1
Washington	1911	1	4[b]
West Virginia	1913	1[c]	1
Wyoming	1915	1	3[d]

a Two additional ex-officio members

b These four have held the office of Director, Department of Labor and Industries since 1921 Prior to that time, the fund was administered by the Industrial Insurance Commission, consisting of three members. Sixteen different persons held the office of commissioner between 1911 and 1921 Under the present regime there is a Supervisor of Industrial Insurance who has executive charge of the fund under the Director's guidance. Four people also have held that position since 1921.

c The fund was under the Public Service Commission from 1913 to 1915, subsequent to which time it has been under the jurisdiction of the Compensation Commissioner

d While legally the fund is operated by the State Treasurer, an Asst Deputy Treasurer acts as Department Manager There have been three such Managers since 1915

Table compiled as of December 31, 1926

Changes in Personnel

Political influence does not stop with the selection of executives It also extends to subordinates though perhaps it plays a less important role in their appointment. As a matter of fact, some officials claim they are entirely free to select competent assistants or at least all except a few department heads, while others admit individual merit is not the sole basis for appointment. In only four states are fund employees chosen by civil service examination. The number of employees on the staff of each fund in 1926 is set forth below in two columns so arranged as to show the ones subject to civil service requirements and those which are not.

TABLE VIII

NUMBER OF FUND EMPLOYES AND MANNER OF SELECTION, 1926

State	Civil Service	No Civil Service
Monopolistic		
Nevada	.	13
North Dakota		20
Ohio	253	
Oregon	.	138
Washington		109[a]
West Virginia	..	73
Wyoming	..	8
Competitive		
Arizona		30
California	354	
Colorado	12	.
Idaho	..	14
Maryland	.	11
Michigan	..	20
Montana	..	10
New York	380	.
Pennsylvania	..	175
Utah		11
	999	632

a Civil service system for fund employees discarded in 1923

Since 632 out of 1631 employees, or at least those among them holding positions of special responsibility, are serving terms of office, the duration of which may be governed by their political affiliations and activities, much of the reasoning advanced in connection with the discussion of executive positions applies with equal force to that portion of the personnel.

Salaries

In the absence of civil service, offices carrying small salaries are not regarded as political "plums," so fall to the lot of the general job-seeker. Employees of high quality are not attracted A liberal salary scale might conceivably draw a better grade of personnel, in spite of the variable tenure of office, but if the compensation were large enough to interest experienced men, it is reasonable to assume that politicians would also be interested, and, accordingly, would dictate the appointments. On the contrary, a liberal salary scale, coupled with a civil service system to assure selection on the basis of merit and permanency of position, would appear to offer a remedy The woefully inadequate schedules of remuneration for most funds, however, indicate that this has not been tried The various salary scales effective in 1926 are given herewith

Most fund officials frankly admit they can not attract and hold capable employees, since they are not in a position to pay salaries commensurate with ability, or to hold out any hopes for advancement in the future Some contend that their organizations, as a result of this situation, serve as training schools for private companies, since the latter are willing to offer substantial inducements to those who show signs of promise. It is true many capable men have remained with the various funds at a genuine sacrifice, but the tendency towards adverse selection—loss of the high-grade and retention of the mediocre—is inevitable under the circumstances [6] Maximum efficiency of operation, therefore, becomes impossible.

In General

The creation of permanent insurance organizations, consisting of far-sighted, competent and experienced executives with well-equipped staffs seems almost hopeless under the present

[6] The experience with the Ohio fund is typical. "We wish also to bring to your attention that during the twelve months ending June 30, 1926, out of a working force of 253 people, the Workmen's Compensation Department lost 46 employees by resignation, representing 131.27 years of experience with the fund Therefore, out of 253 man-years, during the twelve months above mentioned the fund lost 131 27 man-years of experience, or 52 per cent, which is heavy." Actuarial Audit of the Ohio State Insurance Fund, made by Miles M Dawson & Son Issued by Industrial Commission of Ohio, 1926, page 19.

TABLE IX

ANNUAL SALARIES OF COMMISSIONERS AND PRINCIPAL STATE COMPENSATION FUND OFFICIALS AND EMPLOYEES
1926

State	Commission Chairman	Commissioner	Fund Manager	Secretary	Claims Manager	Chief Actuary or Auditor	Statistician	Clerk	Stenographer
Monopolistic									
Nevada	$4,000	$1,800	.	$1,800	$3,000	$3,000	.	$1,620	$1,500
North Dakota	2,500	2,500		2,400	1,980	2,000	1,800	900–1,560	900–1,500
Ohio	5,000	5,000		.	2,400	4,000	3,000	2,000	840–1,800
Oregon	3,600	3,600			2,700	2,700	2,400	840–1,500	840–1,500
Washington	[a]	. . .	[a]	3,600	3,300	.	2,400	960–1,500	1,020–1,620
West Virginia	6,000		.	4,120	2,640	4,020	2,700		
Wyoming				2,500			1,980	1,440–1,560	1,680
Competitive									
Arizona	5,000	5,000	5,000	3,600	2,400	2,700	2,000	1,500–1,920	1,500–1,800
California	5,000	5,000	6,000	4,500	3,600	4,500	2,400	720– 960	900–1,500
Colorado	4,000	4,000	3,500	3,500	3,000		2,500	1,200	1,200
Idaho	3,000	3,000	3,000	1,380	2,040	2,400		1,080–1,320	1,320
Maryland					Data not obtainable				
Michigan	5,000	5,000	6,000		3,600	3,000		1,100	1,300
Montana	5,000	. .	.	2,700		. . .	1,200	1,800	1,200–1,500
New York	8,000	8,000	12,000	. .	6,250	8,000	. .	720–1,700	960–1,650
Pennsylvania	9,000	8,500	7,500		3,000	3,000	3,000	1,500	1,050
Utah	4,000	4,000	3,900	2,400	3,000	2,820		1,500–2,400	1,080

[a] The Director of the Department of Labor and Industries receives a salary of $6,000 while that of the Supervisors of Industrial Insurance and Safety is $4,800 each.

political regime, salary scales, and lack of prospects for advancement Because of its managerial ability, size and practical accomplishments, the California fund was heralded by proponents of state insurance as an outstanding example for many years Indeed, even the insurance fraternity recognized it as being an exceptionally well conducted organization. The history of its management is therefore of special significance When the fund was created, Claude W Fellows was appointed Manager and William Leslie (now General Manager of the National Council on Compensation Insurance) as Secretary-Actuary Mr Fellows accepted the position with the stipulation he was to be entirely free from political interference. Both Governor Johnson and his successor acceded to this That attempts were made by others to control his actions is evident, however, from the following statement.[7]

"During my administration of the fund, I was continually importuned by politicians to make room in the organization for their friends, and pressure was brought to bear upon me to take back employees discharged for rank inefficiency. At one time an attempt was made to divert the moneys of the fund to highway finance If I had not stood stoutly against this, the action would have reduced the surplus of the fund approximately half a million dollars Should the need for insurance brains and competitive instincts be removed by the legislative creation of a bureaucratic monopoly, the greater opportunity for sinecures and the paying of political debts is very apparent indeed"

When Governor Richardson took office, he wished to make a showing of economy so the salary of the manager became the target of his attack At that time, the manager was receiving $10,000 per annum (paid from the premiums of employers, and not the general treasury, so its reduction could have no bearing upon taxes) which was lowered to $6,000. Subsequent events tell their own story. The manager resigned and organized his own insurance company,[8] which is now writing a considerable volume of workmen's compensation

[7] From article by Claude W Fellows entitled "Competition is Healthful for State Insurance Fund," San Francisco Chronicle, December 27, 1926

[8] The Associated Industries Insurance Corporation, San Francisco, California.

business in California His successor was without any previous insurance training or experience.

Ohio, which has the largest monopolistic fund, pays the members of its Industrial Commission $5,000 a year each. T. J. Duffy, who was a member of the State Liability Board of Awards when it began operations on July 14, 1911, continued as a member of the Industrial Commission when it succeeded that Board on September 1, 1913, and was chairman for a number of years He resigned on February 15, 1926, in order, it is reported, that he might earn a more substantial income in other fields.

Establishment of a definite goal and pursuance of a consistent policy looking to its attainment are recognized as fundamental to substantial achievement in private or public undertakings. This necessitates the maintenance of a high standard of administration, upon which the ultimate success of insurance operations must likewise depend But conditions as to tenure of office and salary are not of a nature to assure this. Private companies have been able to attract trained and experienced men by paying substantial salaries and holding forth the prospect of promotion as an inducement for worthwhile efforts Moreover, these men have many years, in most cases, to develop and improve the services they are rendering. Certainly, no state fund can hope to attain as high a standard of efficiency if it cannot hold out to competent men assurance of a fair recompense for their work and continuation in office.

Policyholders' Advisory Committees

Greater participation by policyholders in the conduct of a fund might conceivably tend to counteract some of the evils incident to a purely partisan administration Only two states, however, supply any machinery by which this may be accomplished. The Michigan law stipulates that a meeting of policyholders shall be held each year at which time five contributing members shall be nominated by those present (each risk being entitled to one vote) and certified to the Governor for appointment to the Advisory Board for a term of two years This

Board, together with the Administrative Board, selects the manager and in conjunction with him appoints all employees, besides generally functioning in an advisory capacity. The New York law, as amended in 1922, provides for a committee of nine members to be appointed by the Governor from employers or officers of employers insured in the state fund. They are appointed for three year terms, one-third retiring each year. The scope of the committee's activities is defined as follows:[9]

> "It shall be the duty of such committee to consider the condition of the state fund, and to examine into the condition of its reserves, investments and other matters relating to the administration of such fund It shall have access to all records and books of account and shall have power to require the presence before it, or of any subcommittee, of any officer or employee of the fund Information obtained by members of the committee shall be deemed confidential unless disclosed by order of the committee The quarterly estimates of administrative expenditures out of the fund shall be submitted to the advisory committee for their information and advice"

The Michigan system appears to give policyholders a greater amount of power in event they care to exercise it since the selection of committee members in reality rests with them instead of with the governor.

Supervision by State Insurance Departments

State insurance departments have been established for the regulation and supervision of insurance in the interest of policyholders Monopolistic funds have been exempted from their jurisdiction, however, except that the reserves to be carried by the Washington fund are set up by the Insurance Commissioner of that state. The competitive funds in Arizona, Idaho, Maryland, Montana and Utah are also free from such control though other competitive funds are regulated, at least to some extent, by their respective insurance departments in the same manner as are private companies.

Even if a state insurance department does not have the power of examination and regulation, some provision for audit

[9] New York State Workmen's Compensation Law, with Amendments, Additions and Annotations to August 1, 1926, Article 5, Sec. 106, pages 105 and 106

by another state department may exist For instance, the Arizona, Ohio and Utah funds are subject to examination by the State Auditor, and the Wyoming fund is checked by the State Bank Examiner at the same time that he goes over the accounts of the State Treasurer. There seems to be no logical justification for treating a fund any differently than private carriers as respects regulation by a state insurance department. On the contrary, policyholders should profit from subjecting it to the same strict rules and regulations.

CHAPTER IV

WORKMEN'S COMPENSATION FUNDS

ACCIDENT PREVENTION

From a social viewpoint, an ideal program of service for a compensation insurance carrier consists of four distinct objectives·

1 Systematic and continuous endeavors to locate and eliminate the causes of accidents

2 Prompt and equitable payment of compensation benefits when accidents occur in spite of the efforts directed toward their avoidance

3 Provision of immediate and suitable medical treatment for injured persons

4. A plan for rehabilitating disabled workmen and teaching them some other occupation in order to restore them to society as productive members.

These objectives, and the extent to which the funds have progressed toward their attainment, will be discussed in the order named in this and the following two chapters

Safety heads the list of services which an insurance company should render its policyholders, since the elimination of accidents not only preserves the lives and bodies of employees, but by reducing the amount of money necessary for paying compensation benefits, ultimately decreases the cost of the insurance So whether we regard such activities from a humanitarian or purely mercenary standpoint, the wisdom of them becomes apparent

Without delving into all the various phases of possible safety service, a number of the most important steps in any constructive plan suggest themselves—(*a*) compilation of statistics as to the frequency and severity of accidents and their causes; (*b*) maintenance of a field force of qualified engineers to inspect risks, suggest safeguards and train employees in safety;

(*c*) distribution of educational literature, bulletins and posters to keep constantly before employees the importance of being careful; and (*d*) the inauguration of a merit rating plan which will offer employers a financial incentive to cooperate actively in the elimination of hazards. The last point has been reserved for discussion in connection with rating in general.

Before analyzing the activities of state funds along these various lines, the reader's attention should be called to the fact that in states where private carriers write all the workmen's compensation business or are in competition with a state fund, three distinct agencies frequently perform one or more of these services, each approaching it from a different angle. The inspection of industrial plants affords an excellent example State inspectors will visit factories in order to be sure that certain types of dangerous machinery are protected, fire escapes provided and other requirements of the state labor laws enforced They can compel compliance with the exact letter of the law under penalty of fine or imprisonment. Where the state inspector leaves off, the insurance inspector begins He can suggest means for safeguarding points of operation not covered by state safety codes, assist an employer in devising plans for re-routing the work to eliminate dangerous processes, help to carry on an accident prevention campaign, form a live safety organization among employees and foremen, arrange for the widespread use of safety posters and other material, and in general, enlist the cooperation of men and executives in putting safety first These activities are coupled with a merit rating plan which gives an employer the benefit of his improved experience The bureau charged with the duty of establishing manual classifications, underwriting rules, premium rates and merit rating systems also sends inspectors to visit policyholders but their duties [1] are confined to verifying the

[1] In the Constitution of the Pennsylvania Compensation Rating and Inspection Bureau, for example, the objects of the Bureau as regards inspection are stated as follows:

"To inspect risks for the purpose of determining individual risk classifications and for the application of schedule or merit rating plans, established in accordance with paragraph 1 of this article, in order to encourage employers to reduce the number and severity of accidents by adjusting premium rates to working conditions" Art II, Par 3

classification and rate for each employer's risk. In other words, if the state and insurance inspectors have performed their functions well, and if the risk is schedule rated, the bureau inspector will see that the policyholder receives due credit in his premium charge for his safety efforts.

A discussion of the avenues by which the prevention of industrial accidents may be approached would lead us too far afield but the illustrations given serve to show that compensation insurance carriers may be a powerful factor in guarding the lives and bodies of workers Furthermore, their influence in that respect may be expected to grow as they succeed in educating employers to the actual dollars and cents savings which ultimately result In every field of competitive insurance, the rivalry between carriers has unquestionably tended to accelerate recognition by progressive underwriters of the fundamental importance of loss prevention It is of particular significance, therefore, to contrast monopolistic and competitive state funds in this respect.

Monopolistic

The Nevada, North Dakota, West Virginia and Wyoming funds conduct no accident prevention or inspection work of any type whatsoever. It is true that the state, through a special department, does provide in Nevada and West Virginia for the inspection of mines and the enforcement of certain safety regulations Even here, however, the scope of activities is very limited. For example, in West Virginia it does not extend to the inspection of boilers Since the fund also makes no provision for this, it is maintained by fund officials that employers often will not carry boiler insurance but expect their compensation coverage to protect workmen in event of injury. In the absence of a schedule rating plan they cannot be penalized for this, and, of course, would feel the effect of it in an experience rate, only after a disaster. North Dakota and Wyoming lack general safety legislation and the fund manager in the latter state asserts that employers in his jurisdiction do not know how to prevent accidents, so are badly in need of instruction.

The Oregon fund has one inspector in the field to aid employers in the organization of safety committees, and pays part of the salary of the boiler inspector attached to the Labor Commissioner's office. A five per cent reduction in rate is offered to policyholders as an inducement for the formation of a plant safety committee but as this may be obtained merely by a nominal compliance, it amounts to little more than a premium rebate[2] Fund officials contend that if safety activities were made compulsory, employers would elect to go out from under the law.

At one time, safety service by the Washington fund was confined to the inspection of risks, but as the result of a survey made in that state, officials maintain that only 22 per cent of accidents would be eliminated if all machinery were rendered 100 per cent mechanically safe, so the emphasis has been shifted to educational work. The distinctive feature of the present system is the Flying Squadron, consisting of the Supervisor of the Safety Division and three assistants, which holds industrial safety schools for large plants and groups of plants Employers are urged to send their key men to these classes in which from 2½ to 3 hours of lecture and demonstration are given each night for three nights. Trade hazards of the par-

[2] "The provisions as established by the commission, compliance with which entitles an employer to this reduction in rate, are as follows

"1 Organization

"*a* The formation and maintenance of a safety committee of not less than three persons, to conduct work in accident prevention.

"*b* Meetings of such committee at least once each month for the purpose of considering the hazards of the various occupations within the employment, to receive and to make recommendations for safeguarding, and to consider generally the causes of accidents occurring to fellow employees.

"*c* Forwarding of copies of minutes of each meeting of the safety committee to the State Industrial Accident Commission at Salem.

"2. Educational Work

"*a* Maintenance of a bulletin board for each separate plant of the employer and for each substantial number of workmen regularly employed away from the plant of the employer, and the posting thereon of safety bulletins, posters and other material that will tend to interest and instruct the workmen in accident prevention

"*b* While it is not made mandatory by the commission, it is urgently recommended that talks be given to the safety committee and the foremen occasionally by qualified safety engineers and others experienced in safety, also that at longer intervals mass meetings of the workmen be held for this purpose"

ticular industry and methods of prevention, of organizing a job for safety, and of rendering first aid treatment to injured men, are discussed It is estimated that 2500 men can be reached every year by this means The plan was initiated June 30, 1925 About once a month an effort is made to hold a meeting exclusively of foremen in various places The problem is broached to them from a different angle, principal stress being laid upon the allocation of tasks to workmen in such a way that inexperienced men will be instructed as to safeguards and kept in less hazardous positions until they have learned how to protect themselves from danger The fund also has employees to inspect and classify risks and audit payrolls but the dissemination of safety knowledge is largely left to the Flying Squadron.

Even though the Ohio fund has from its inception been the largest of all, judged by premium income, safety service was completely neglected for many years This gave rise to much severe criticism. As a result, the Division of Safety and Hygiene has recently been established under a constitutional amendment (1923) and enabling act (1925) which permit one per cent of the premium income received from employers to be used for this purpose. In August, 1926 (about one year after its creation) this department had on its staff six field engineers and four safety investigators in addition to a statistical force. It is approaching the prevention of industrial accidents entirely from an educational point of view Monthly reports of accidents are compiled and distributed to a selected list of employers, chambers of commerce, labor organizations, safety engineers and other interested parties The primary duties of the field engineers are to survey industrial plants, present recommendations for removal of hazardous conditions, assist in forming plant safety organizations and address employees on the subject of safety The enforcement of safety codes is assigned to another division not associated with the compensation fund No schedule rating plan is in effect but any reduction by a policyholder in his accident hazard should result ultimately in a decrease of cost through the operation of experience rating.

When employers recognize the fundamental importance of safety work, there is a tendency for them to provide at their own expense what the state fund fails to furnish. For example, in Ohio, private "service agencies"[3] have come into existence which are paid by fund policyholders to look after their inspections, safety work, claims and other matters relating to compensation insurance There are twenty-two industrial safety engineers in Oregon who function in the same capacity, each representing a number of establishments The Nevada Mine Operators' Association employed a safety engineer for two years, and now the larger companies have their own As a result, their loss experience is much more favorable than that of the smaller mines without any regular safety[4] work.

Though the Ohio and Washington activities, and to a lesser extent those of Oregon, constitute a step in the right direction, they do not comprehend all possible avenues of approach to the problem and are of such recent development as to preclude any accurate judgment with respect to their ultimate results Employers in both states still supplement the fund's service with that of their own safety engineers or of the private agencies just described.

The foregoing summary of the monopolistic state fund endeavors, directed to the prevention of accidents, clearly warrants the assertion that these bodies have been very backward in appreciating the necessity of such a program, and taken as a whole, have even yet made little progress in the field The need for it becomes still more apparent when it is realized that enlightened employers will provide at their own expense a service which should be an integral part of their insurance protection

COMPETITIVE

Of the competitive funds, four—Arizona, Idaho, Maryland and Montana—have practically no regular service The

[3] The present Chairman of the Ohio Industrial Commission, T P Casey, was for a number of years manager of a "service agency" in Cleveland

[4] Information supplied personally by Henry M Rives, Nevada Mine Operator's Association, Reno, Nevada

Arizona fund does have two men who devote part of their time to safety work with contracting risks but since the State Mine Inspector has jurisdiction over mining (the industry producing the greatest number of accidents) the Commission is not empowered to do more than extend assistance to him when called upon Large mining companies have, however, developed their own safety organizations. Arizona also lacks a state safety code but the commissioners feel that the method of apportioning dividends which is used by the fund will encourage employers to exercise safety precautions and thus bring about the same end. Experience elsewhere would not warrant such a conclusion. The Idaho fund grants a rate of $3 50 instead of $4 50 to sawmills whose equipment comes up to the American Sawmill Standards Conformity is verified by the two auditors who inspect risks, audit payrolls and check claims. Though the Maryland fund has not an inspection or accident prevention department, the superintendent will study causes of accidents to see what can be done to prevent them and then write or see the individual policyholders The enforcement of state safety legislation in Montana comes within the jurisdiction of the Industrial Accident Board (which also administers the fund) It has six boiler and mine inspectors to cover all such risks in the state without reference to the company writing the insurance Fees are charged for these inspections which more than cover the cost, the excess being applied toward the expenses of administering the fund Since there is no merit rating plan, employers cannot be penalized for bad conditions and unfavorable experience, or given credit for bettering their situation. As a result, the fund has lost some good risks which objected to being classed on the same plane as poor ones The Industrial Accident Board has recognized for some time the deficiencies of the present system and the hardships ensuing[5] Under its set-up, however, the

[5] "Educational campaigns on the value and necessity of safety first are very much like courses in music. They must be continuously kept up or the effect is lost Workmen who are not constantly reminded and reminded of the dangers incident to their employment grow careless Employers whose interest in the safety of workmen is allowed to lag grow indifferent The inevitable result is an increase in the percentage of accidents.

remedy lies not in its own hands but in those of the legislators.

Three funds—Colorado, Michigan and Utah—provide in some measure, though perhaps small, for safety activities. A single safety inspector of the Colorado fund each year visits practically every schedule rated risk[6] Others are not inspected nor is safety literature distributed The Michigan fund has three inspectors who determine classifications and suggest means for remedying hazards. No safety material is provided though each employer whose establishment has been visited is supplied with a copy of the recommendations. The Utah fund has one inspector to determine physical condition of risks. On the basis of his report, a letter is written to the employer suggesting improvements which should be made.

Three competitive funds—California, New York and Pennsylvania—are the only ones which have placed any substantial emphasis upon inspection and accident prevention. In California, the fund has fourteen safety inspectors on the road all the time, with superintendents in San Francisco and Los Angeles, while the Pennsylvania fund has thirteen (seven mine and six factory) inspectors. These inspectors not only visit employers with a view to determining hazards and advising as to methods for their reduction or elimination, but make safety

"For the past five years the Accident Board has had no funds with which to prosecute and carry on educational campaigns for safety first The result is reflected in the percentage of accidents It has almost doubled in five years. The compensation cost ultimately borne by the employer goes up in direct proportion to the percentage of accidents The Board believes it has been false economy to curtail safety first work, but has had no choice in the matter The funds with which to carry it on were denied by the legislatures

"Many of the larger employing concerns in the state—particularly those who carry compensation under Plan One (Self-Insurance)—maintain their own accident prevention and safety first departments. That these do good work, and that it pays in dollars and cents, can be easily demonstrated by comparing the accident percentage where safety first work is done with the accident percentage where such work is not done, in the same line of employment" Eleventh Annual Report of the Montana Industrial Accident Board for the year ending June 30, 1926, page 81

[6] In commenting on the situation as regards safety activities, A H Mowbray, Consulting Actuary to the Colorado Compensation Insurance Fund, states in his 1925 report, page 17 "Above all, for the benefit of its experience and, more important, for the saving of life and limb of the workers of the state, the fund should have its present efforts made more effective by a well-organized and skilfully conducted Safety Department, which its appropriations do not now permit"

addresses and assist in organizing plants for safety work. Policyholders in Pennsylvania are visited twice a year or oftener if they are contemplating changes in the lay-out of their establishments. The Safety and Inspection Department of the New York fund has four safety organizers in the field, and thirteen inspectors who make the following types of surveys. general inspections, compliance inspections, special inspections, safety inspections, rating board check inspections, service calls and accident investigations

Judging from the 1926 report of the New York Industrial Commissioner, this fund has a broad conception of its responsibilities to policyholders and employees for the reduction of accident frequency and severity.[7]

Although the three largest competitive funds—California, New York and Pennsylvania—carry on regular organized accident prevention campaigns, the status of this activity in most of the others is not encouraging Because the latter are com-

[7] "The fund has safety engineers, specially trained for the purpose, who point out to the employer, first, that it is not only his moral and social obligation, but also that it pays in every way to operate his plant with the smallest possible number of accidents and to confine the accidents which occur to the non-serious type, second, to conduct an accident prevention campaign and organize safety committees in these plants, with the co-operation of the employer, and third, to recommend the most effective means of guarding machines, tools, elevator openings, stairs, etc The employer is also informed in respect to the reduction in rates available to him under the schedule rating plan for compliance with the proper safety standards

"In its accident prevention activities the fund is assisted by the central rating organization through the application of the schedule rating plan The fund cooperates with the National Safety Council and makes full use of its facilities in the interest of safety and accident prevention The fund offers its policyholders a comprehensive safety service, through the furnishing of shop posters, safety slogans, and the organization of safety education campaigns

" The fund's safety engineers always make a practice of recommending such safety devices as will not slow down production, and they modify standard safety devices when necessary, so that they may be effective without slowing down the output of the machine which they are designed to guard

"The fund has endeavored to extend its inspection and accident prevention service to policyholders with the conviction that the primary duty of a compensation carrier is to prevent accidents, while the matter of compensating workmen for injuries is the natural function of the carrier after the employer has failed to prevent the accident" . —Annual Report of New York Industrial Commissioner, 1926, pages 363 and 364

paratively small in size (the premium income of each being less than $650,000 per year) and, except for those in Maryland and Michigan, operating in states where there has been comparatively little industrial development, the same competitive urge to perform the service has probably not been felt. The amount of business written by the Maryland and Michigan funds is less than ten per cent of that carried by private companies. Inadequate safety service may be a partial explanation for this.

In General

While it has been established beyond question that safety service does tend to lessen the frequency and minimize the severity of accidents, an accurate valuation of the ultimate benefits to be expected in return for the outlay of a given expenditure is impossible Furthermore, the forms it should assume and the extent to which it should be carried are debatable points Except for the few very large funds, there is also a question whether the average state body can approach the problem of accident prevention as scientifically or practically as the private company with a wide variety of risks and a large volume of business which would justify the expenditure of substantial sums to build up a highly complex safety division manned with experts. When these considerations—and particularly the difficulty of forecasting exact results—are coupled with an administrative system by which a budget for the service must be approved by legislators unfamiliar with insurance either from the standpoint of conservation or indemnity, or, on the other hand, be approved by political appointees who want to make a showing of economy while in office and regard the probable achievements of such activities as too far removed and intangible, the humanitarian aspects are prone to be overlooked

The lack of organized safety activities in the great majority of our state funds, which presumably have been created for the social welfare, is a sad commentary upon the ideals of public service held by those charged with their administration

Only the force of keen competition from private companies, operating in the public welfare, but organized for gain to stockholders or policyholders, has succeeded in bringing any fund to the adoption of a comprehensive safety program. And this is true despite the fact that fourteen of the seventeen funds have been operating ten or more years.

CHAPTER V

WORKMEN'S COMPENSATION FUNDS

PAYMENT OF BENEFITS

Although the prevention of accidents is a positive social service and their indemnification but a palliative, the palliative is one which must be properly applied if it is to fulfill the end for which designed. An analysis of claim payments will be concerned therefore with several important considerations.

Schedule of Benefits

The establishment of a definite scale of benefits in accordance with which workmen under the act are to be indemnified for industrial injuries lies at the very heart of workmen's compensation legislation. These benefits are guaranteed to the injured person in exchange for his right to bring suit for damages. They represent the state's standard of what constitutes social justice to workmen killed or disabled by accident or occupational disease, and are not governed by the agency writing the insurance It is true the schedules of benefits vary with the different states and the establishment of a low maximum may tend to make the average weekly compensation actually paid bear a very much smaller ratio to the average weekly wage than the nominal percentages provided by law (ordinarily 50, 60 or 66 2/3 per cent) would indicate In other words, the application of a set maximum to a rigid scale may make the *effective* rate of compensation considerably less than the *nominal,* but such a result would follow irrespective of the carrier.

Equity in Payment

Though determination of the scale of payments is outside the province of the insurer, the latter's function is to see that each injured party receives every cent of the benefits to which

he is legally entitled In fairness to policyholders, the carrier should not pay more—in justice to workmen, it must not pay less The principle which should apply is easily stated—an ascertainment, though, as to whether a particular carrier is settling all claims fully is not so simple Without making a comprehensive survey, or even a test check of representative cases settled, and reviewing all the facts in each, could one definitely state there is a tendency either to over or under pay. Such an investigation has never been made for all the funds though some individual states have studied the problem

The most generally accepted bases for comparing the liberality of payment are the average amount of compensation awarded per case, the number of cases for which appeals have been taken by the carrier to the commission or courts and the number of cases which have been won or lost of those appealed to the courts by employees The late Carl Hookstadt, in the report of his investigation on "The Comparison of Workmen's Compensation Insurance and Administration"[1] uses the first two.

[1] Bulletin No 301, U. S Department of Labor, "Comparison of Workmen's Comp Ins & Administration," 1922, pp 13 and 14 This bulletin summarizes an investigation of compensation insurance systems which was completed in 1920 by the Bureau of Labor Statistics Among other things, it directs attention to the fact that many private carriers, as well as state funds, have neither been equitable nor prompt in their payments, and in its summary conclusions with respect to service (page 21) states

"*Service*—As regards service, comparisons are difficult because of the great variations among different insurance systems As to promptness of payments there is little to choose among the different types of insurance carriers Some of the State funds pay promptly while some do not The same thing may be said with respect to stock and mutual companies However, a comparison of one of the best-managed State funds in this respect with one of the best-managed private companies shows that the State fund is more prompt in its payments than the private company. A significant fact developed by the investigation is that self-insured employers, whom one would expect to pay promptly, are no more prompt in this respect than either State funds or private carriers As regards liberality of payment most of the State funds are more liberal in this respect than either stock or mutual companies As regards accident prevention some of the private companies are doing excellent safety work, whereas few of the State funds have done any effective safety work"

That all types of carriers in New York have likewise been guilty of underpaying claimants there, is brought out in the "Report of Investigation by Jeremiah F Connor, as Commissioner under Section 8 of the Executive Law, known as the Moreland Act, in Relation to the Management and Affairs of the State Industrial Commission" Nov 17, 1919 One hundred and fourteen out of a thousand test cases were found to have been underpaid

Average Award

This method would not be applicable, without employing differentials, in making comparisons between states because of the variance in the benefits allowed It could only be used for comparisons between carriers operating under the same law. In competitive fund states, therefore, it might be adopted as a means for measuring the relative liberality of the state fund, private companies and self-insurers. But even such an use is subject to the criticism that different carriers may be covering entirely distinct types of industry where the severity and frequency of accidents are in dissimilar proportions and the wage scales on varying planes. For example, the mining, oil and department store risks in California are largely carried by the state fund while the factory and contractor risks are quite generally written by private carriers or are self-insured If in one form of employment, the frequency is low and the severity high, settlements, according to the standard of average award, would appear liberal, whereas in another with a high frequency and low severity, the contrary would be shown even though injured persons in both cases may have been paid everything to which entitled. Furthermore, such a gauge penalizes, in a comparison, the company which succeeds through safety service in reducing the severity of accidents as well as the one which seeks out and pays every claim, regardless of how trivial, since the payment of many small amounts will naturally tend to lower the average though in reality reflecting a liberal attitude.

Cases Appealed by Fund

Except in Wyoming, where awards are made by the courts in the first instance, all monopolistic funds are administered by the same officials who are charged with enforcement of the law.[2]

In the judgment of the writer, neither of these investigations, which are based on figures now out of date, presents a convincing argument against the merits of a competitive regime He, therefore, can not agree with Mr Hookstadt's conclusions as respects the desirability of state compensation insurance funds, and especially those of a monopolistic character Competition among carriers which are regulated and supervised by the state, and whose awards are subject to the approval of an impartial board or commission, composed of competent men, would appear to afford the surest safeguard against abuses

[2] See Chapter III.

It is hardly likely that a commission which has made an award, either on the basis of paper proofs or after a hearing, will appeal from its own decision. In those competitive fund states, other than New York, where a degree of separation between the commission and fund management exists, an appeal may be taken to the courts by fund officials[3] However, the administrative system, previously explained, is of such a nature as to preclude this being done frequently except in test cases where court interpretations of doubtful provisions are desired. Statistics showing the relatively few cases appealed by the funds are, therefore, open to attack as a means of proving liberality.

Appeals to Courts by Employees

It is maintained by some authorities that figures indicating the number of awards appealed by employees, considered in connection with the action taken on them by the courts, are the best evidence of a carrier's liberal or illiberal attitude. Data regarding such appeals are not readily available for all state funds but figures for the Ohio body may be cited by way of illustration.[4]

[3] This was at one time impossible in Colorado, but under an amendment to the law, may now be done with the consent of one commissioner

[4] This table and the following summarization of it are taken from report of the Actuarial Audit of Ohio State Insurance Fund—Page 51

"This report indicates the steady increase in the number of cases brought on appeal from the decision of the Commission We have given in the tabulation the average number pending on the first of each month in the Court of Common Pleas only It shows that from 196 in the first of the 4 years indicated, the number had risen to 261 in the last of the 4 years, an increase of 33 1/3 per cent

"The tabulation also shows that a reversal of conditions has occurred in the later years, as against those of former years, from a majority of cases being decided in favor of the Commission to a majority of cases being decided against the Commission In the Court of Common Pleas the judgments rendered were year by year as follows, those for the Commission being stated first, and those against the Commission second · 19 to 11; 20 to 20, 4 to 8, 12 to 34. In the Court of Appeals the record is 6 to 3; 7 to 5, 0 to 0, 1 to 12. In the Supreme Court 3 to 3, 2 to 2, 0 to 3, 2 to 6

Year	Cases on Appeal from Decision of Commission						
	Average Number Cases Pending First of Each Month in the Court of Common Pleas	Judgments Rendered					
		Common Pleas		Court of Appeals		Supreme Court	
		For Comm	Vs Comm	For Comm	Vs Comm	For Comm	Vs Comm
7/1/21–6/30/22.	196	19	11	6	3	3	3
7/1/22–6/30/23	219	20	20	7	5	2	2
7/1/23–6/30/24	247	4	8	0	0	0	3
7/1/24–6/30/25 .	261	12	34	1	12	2	6

Miles M. Dawson, from whose Actuarial Audit of the Ohio fund the above figures were abstracted, calls attention to the complicated court procedure in Ohio, to the prosecution of most cases by county district attorneys instead of Commission attorneys, and to the trial of them by courts frequently unfamiliar with the intent and operation of the compensation law. The inference is that if all cases were tried by the Attorney General in one particular court, without a jury, and the right of appeal from its decisions allowed to the state Supreme Court, on matters of law only, the Commission would lose fewer suits.[5] The Special Massachusetts Commission previously

[5] ". . under the Constitution and other laws of Ohio, an excellent way would be to have the case tried by the Attorney General before the Appellate Court of Franklin County, where the office of the Attorney General is located, and having what is shown by the facts and whether the law applies quickly decided by the said court, without a jury. If the claimant is satisfied with the decision the Commission could pay the claim If the Commission or the claimant be not satisfied with the decision, either party could then go to the Supreme Court upon questions of doubtful law as applicable to the case in hand. In neither case need there be a jury:

"Under such procedure quick and sure decisions could be attained.

"The above is the manner in which the New York workmen's compensation law operates The case is decided by the Commission, from which an appeal can be taken to the Appellate Division of the Supreme Court, Third Department, which said Appellate Division is specifically designated for workmen's compensation appeals, and on questions of law only the case can be further appealed to the Court of Appeals The result is a court which is specially well informed upon workmen's compensation questions, inasmuch as it is specifically designated for this work, passes on them, definite decisions are rendered, and a well-defined system of jurisprudence built up"—Ohio Actuarial Audit (1926), previously cited, page 52

mentioned reaches a different conclusion in its comment on these figures[6]

"During the years 1923, 1924 and 1925 the Supreme Court of Ohio has sustained orders of the Ohio Industrial Commission denying compensation in 36 cases It has reversed such orders, and granted compensation in spite of the Commission, in 62 cases

"During the same years (and approximately the same period) the Massachusetts Supreme Court sustained orders of the Industrial Accident Board denying compensation in 10 cases and in no case reversed such orders These figures are based on an examination of the reports by this Commission

"First, and of less significance, it will be seen that employees appealed from orders of the Industrial Accident Board in only 10 cases during the last three years whereas Ohio employees seem to have been far more often aggrieved at their Commission's rulings, for they appealed from orders of the Ohio Commission in ninety-eight cases, almost ten times as often

"Second, and of great significance, it will be seen that the Ohio Supreme Court was of the opinion that the Ohio Commission had wrongly ruled against employees in sixty-two cases out of ninety-eight, or almost two thirds of the time, whereas whenever our Industrial Accident Board has ruled against employees and its order has been appealed from in the last three years the Supreme Court has never considered it wrong

"Either our Supreme Court is far less liberal toward the employee than the Ohio Supreme Court or our Board is far more liberal than the Ohio Commission Courts of law deciding questions of law on printed records have much less scope for individual proclivities and sympathies than have boards and commissions trying their cases on the facts with living witnesses and claimants before them There is no reason to think our Supreme Court less liberal to workmen than the Ohio Court The conclusion seems inevitable that the Ohio Industrial Commission administering its State fund for the benefit of employers while at the same time it adjudicates the claims of employees is less liberal than our Board and less sympathetic to injured employees"

From the foregoing, it is evident that the loss of a substantial proportion of suits is regarded by some as proof of illiberality, not alone in the particular cases involved, but likewise in others where the workman assumes the Commission's award is final and is not aware of his right to appeal Contrariwise, however, is encountered the argument that only a relatively few cases of the thousands handled ever reach the

[6] Report of Special Massachusetts Commission previously cited, pages 28 and 29

courts and a difference of opinion as to the rights of an employee in such a small number does not warrant any such conclusion as to liberality The writer would not be willing to accept either premise without qualification, since the data he has been able to compile on appealed cases do not appear adequate,[7] either in quantity or significance

Though only an actual review of claims settled or a representative number thereof, made for all funds on a similar basis, could yield conclusive results as to the relative equity with which they are handled, nevertheless figures, such as those for Ohio, do serve as a danger signal, pointing out the possibilities of injustices to workmen under a dual administration system The body determining the award which is payable should be thoroughly impartial and completely separated from the carrier that makes the payment Otherwise, consciously or unconsciously, its decision as " judge " may be influenced by its functions as " insurer," or vice versa.

Promptness in Payment

A serious evil of the old employers' liability system was the delay encountered in making a recovery even when a clear cut case of negligence on the part of the employer existed Suits dragged through the courts. Although an award for damages might be made, injured parties suffered frequently from financial as well as physical distress since the amounts allowed were ordinarily not received in time to meet the extra expense that disability or death involved, or to provide for dependents at the most critical period Workmen's compensation legislation sought to meet this situation by providing for the payment

[7] For example, during the Nevada fund's thirteen years of experience, " in addition to two friendly suits to determine questions of constitutionality, sixteen suits have been instituted in the courts of this state by dissatisfied claimants, with the following result

2—Dismissed
4—Adjusted without going to trial
5—Won by Plaintiff
3—Won by the Commission
2—Pending before the Courts

16"

Biennial Report of Nevada Industrial Commission, July 1, 1924, to June 30, 1926, page 6

TABLE X

Claim Handling by State Funds

State	Frequency of Compensation Payment[a]	Length of Waiting Period	Reports Filed by			Claims Investigators	Branch Offices	General Procedure[d]
			Employee	Physician	Employer			
Monopolistic								
Nevada	Monthly	7 days[b]	Y	Y	Y	0	0	Awards by Commission—Largely on paper proofs
North Dakota	Bi-weekly	7 days[b]	Y[c]	Y	Y	0	0	Awards by Commission—Largely on paper proofs
Ohio	Bi-weekly	7 days	Y[e]	Y	Y	[i]	9	Awards by Commission—On paper proofs or report by referee or deputy holding preliminary hearing
Oregon . . .	Monthly	0	Y	Y	Y		1	Awards by Commission—About 90 per cent on basis paper proofs.
Washington	Monthly	3 days	Y	Y	Y	4	6	Awards by Dept of Labor and Industry—Largely on paper proofs
West Virginia	Monthly	7 days	Y[c]	Y	Y	7	0	Awards by Commissioner—Largely on paper proofs—No hearings
Wyoming	Monthly	7 days[b]	Y[c]	Y[c]	Y[c]	0	0	All awards by District Courts
Competitive								
Arizona	Monthly	7 days[b]	Y[c]	Y	Y	0	0	Awards by Commission—Largely on paper proofs
California	Weekly	7 days	Y	Y	Y	10	3 for claims, 5 others	Voluntary agreements approved by Commission—Disputed cases sent to referees—Review by Commission
Colorado	Monthly	10 days	[f]	Y	Y	0	0	Upon employers admitting liability, awards by Commission—Largely on paper proofs—Hearings in 5 per cent of cases
Idaho . .	Monthly	7 days[b]	Y	Y	Y	0	0	Voluntary agreements approved by Board—Disputed cases sent to arbitration committee—Review by Board. Not over 2 per cent investigated

TABLE X—(*Continued*)

State	Frequency of Compensation Payments[a]	Length of Waiting Period	Reports Filed by			Claims Investigators	Branch Offices	General Procedure[d]
			Employee	Physician	Employer			
Competitive								
Maryland	Weekly	3 days	Y[c]	Y	Y	1	0	Awards by Commission on paper proofs or referred to arbitration committee
Michigan	Weekly	7 days[b]	—	Y	Y	2	0	Voluntary agreements approved by Department of Labor and Industry on paper proofs—Hearings, if controversy
Montana	Monthly	14 days[b]	Y[c]	Y	Y	0	0	Awards by Board—Largely on paper proofs—Hearings on disputed cases by Board members
New York	Bi-weekly	7 days[b]	Y[g]	Y	Y	15	4	Hearing on every case by referees.
Pennsylvania	Bi-weekly	10 days	Y	h	Y	30	14	Voluntary agreements approved by Board in 90 per cent of cases—Others (where disputed) handled by referees with appeal to Board
Utah	Monthly	3 days	Y	Y	Y	1	0	Awards by Commission—Largely on paper proofs.

Note—Y indicates such a report is required

[a] The following exceptions to the general practice should be noted: In Oregon, employee can receive payments bi-weekly upon request, in West Virginia, open cases are paid twice a month; in Washington, all permanent partial disabilities are rated as soon as a man is surgically healed and he is paid in a lump sum and the Department may close out any pension claim with a lump sum payment not to exceed $4,000, in Wyoming, lump sum settlements are made for death and permanent total and permanent partial disabilities, in Colorado, temporary total claims are paid every two weeks; in Idaho, death and permanent total disability claims are paid monthly and others every two weeks though law says weekly; in Utah, claims are paid monthly or semi-monthly unless employee requests weekly payments. In most states, settlement is not made for short term disabilities until the employee has returned to work and all reports have been filed

[b] Payments are made retroactive if disability extends beyond one week in Nevada; 1 week in North Dakota, 3 weeks in Wyoming; 2 weeks in Arizona; 7 weeks in Idaho, 6 weeks, or if death occurs, in Michigan, 6 weeks in Montana; and 7 weeks in New York.

[c] An affidavit to the report is required In Wyoming, all monthly claim forms must be sworn to likewise.

[d] Appeal to the courts is permitted in all states though frequently limited to points of law.

[e] Affidavit required if employer fails to file report

[f] Report filed by employee only in event of contest

[g] By law, a workman is supposed to file a claim to preserve his rights but this provision is set aside in cases where actual payments of compensation have been made. Furthermore, it is often not necessitated by the fact that in following the procedure of Section 25, notification to the Department of Labor as to controverted or uncontroverted cases produces action by award or by advance payment.

[h] In some cases the doctor is asked to fill out a special report form.

[i] This fund has a field force of about 100 men who investigate claims and audit payrolls.

of (1) compensation benefits to begin immediately or after the expiration of a stipulated waiting period, and continue in the same manner as wages so they might function as a substitution for regular income, (2) medical, surgical and hospital attention (either with or without limit as to cost) for those injured; and (3) funeral expenses (maximum limits in the various states range from $75 to $200) for those killed

Though a few weeks postponement in the payment of his bill may inconvenience a doctor or an undertaker, the matter is not so serious to them as a similar delay in the payment of compensation benefits to an injured man and his dependents if they have nothing laid aside for an emergency and are relying on each day's wage for the necessities of life Every effort, therefore, should be put forth by the insurance carrier to investigate, adjust and pay its claims promptly The frequency with which compensation payments are made (whether weekly, bi-weekly or monthly), the length of the waiting period, the formal procedure established for making claims and the facilities available for investigating and adjusting them promptly have a decided bearing upon the length of time which will elapse from the date of accident to the date when the employee gets his first check These various factors for the state funds have been summarized in Table X.

Frequency of Payments

Five monopolistic and five competitive funds ordinarily pay compensation benefits monthly, two monopolistic and two competitive bi-weekly and the remaining three competitive funds weekly It is thus evident the system of paying claims tends in most cases to militate against prompt settlements. Undoubtedly, it likewise tends to decrease administrative costs, if for no other reason than because the clerical work involved is less for drawing up and mailing out a smaller number of checks But the value of such economy is highly questionable when, from a social viewpoint, it is in opposition to the spirit of compensation legislation.

Waiting Period

The compensation law in one monopolistic fund state stipulates no waiting period, in another there is a three day and in five a seven day period, whereas two competitive fund states have a three, five a seven, two a ten, and one a fourteen day elimination. Payments are retroactive in eight of the states when disability extends beyond a given time.

Though a long waiting period may be a factor in delaying settlements, such a result does not necessarily ensue. On the contrary, a carrier may utilize that time for investigating accidents and, in the absence of a dispute, be prepared to make first payment immediately after its expiration. Any very marked difference in the average lapsation of time in various states would be attributable to factors other than this.

Procedure in Handling Claims

With the exception of Wyoming (where the District Courts pass on claims) practically all awards in monopolistic fund states are made by the commissions on the basis of paper proofs (i.e reports obtained from employee, physician and employer) and the amounts allowable are determined on the basis of the facts set forth therein. A delay in the submission of any of the three reports will necessarily hold up action on the case. An investigation made by the Bureau of Labor Statistics [8] several years ago indicates that employers were fairly prompt

COMPARISON AS TO PROMPTNESS IN REPORTING ACCIDENTS BY EMPLOYER, PHYSICIAN AND WORKMAN IN CERTAIN STATES

State	Average interval (median) between date of accident and receipt of—		
	Employer's Report	Physician's Report	Workman's Report
	Days	Days	Days
California Fund	5	8	20
West Virginia	7	36	46
Utah Fund	8	14	30
Oregon	9	7	17
Maryland	9	27	26
British Columbia	13	7	18

[8] Bulletin No 301 (previously cited). Pages 34-37 The following table taken therefrom is illustrative.

in reporting accidents, physicians frequently quite slow and employees notoriously slow. The apparent laxity of the person most vitally concerned, namely, the injured workman, may be due to a number of reasons, as physical condition rendering any action on his part difficult or impossible, ignorance of rights, lack of knowledge as to procedure and inability to read and write The requirement of an affidavit to his claim in some states would appear to be a further cause of delay.

Although many of the competitive funds also pay claims which the commission has approved on the basis of the three reports mentioned, the three largest—California, New York and Pennsylvania—follow a somewhat different practice. Voluntary agreements between a workman and his employer (or employer's insurer) may be submitted to the California Commission or to the Pennsylvania Board for approval and disputed cases assigned to referees for hearing with right of review by the Commission or Board under certain conditions. In New York a hearing is held on every case. While the respective state funds may wait until final approval before making any payments, they are not necessarily obliged to do so but may begin to pay as soon as the agreement is reached.

Claims Investigation

There are two means by which a carrier may speed up compensation payments The first involves having branch offices scattered throughout the territory readily accessible to injured workmen and their representatives, and a staff of claims investigators and adjusters who will follow up reports of accidents and see that all papers are filed promptly. The second way in which payments may be expedited is by beginning them immediately in undisputed cases without waiting for formal action by the commission. This, of course, is predicated upon the idea of prompt investigation, but as will be noted from the table presented above, few funds have branch offices or claims investigators and even in the states which do, the staff is frequently too small to accomplish very much.

The Result

As might be anticipated, the variance between the funds in the factors above mentioned has brought about a very wide divergence with respect to the amount of time elapsing between the accident and date of first payment. Unfortunately, no tabulation has been made for most funds covering this point and where figures are available, they are not on the same basis. The author, however, raised the question as to the time which would ordinarily elapse in clear-cut, uncontroverted disability cases if proofs were filed immediately and all evidence showed the incapacity was total and would extend for a period of at least three months. The object of stipulating the latter was to eliminate very short disabilities since many funds do not pay for them until all final papers have been returned and the employee is back at work. This frequently involves a very long delay but if the amount of time actually lost from work is small, it is not serious The figures procured are exhibited in the following table and may be regarded as representing the minimum intervening period for each state fund. Too much weight should not be placed upon them since they are not based, except for two states, on actual cases but only on the estimates of various officials as to the time necessitated by their usual routine under the ideal conditions assumed.

TABLE XI

MINIMUM INTERVAL ELAPSING BETWEEN DATE OF ACCIDENT AND DATE OF FIRST PAYMENT

Monopolistic		Competitive	
Nevada	33 days	Arizona	15 days
North Dakota	14 days	California	9 days[a]
Ohio	14 days	Colorado	15 days
Oregon	30 days	Idaho	14 days
Washington	36 days	Maryland	14 days
West Virginia	No data	Michigan	21 days
Wyoming	35 days	Montana	28 days
		New York	19 days[b]
		Pennsylvania	10 days
		Utah	30 days

a Average time from date of notice to date of first payment
b Average time from date of injury to date of first payment based on records of four months

The instances in which ideal conditions attend the entire handling of a case, as assumed in the preparation of the above table, are rare. Consequently, the delay in payments is ordinarily very much longer. For example, a recent survey in Ohio [9] indicates the average lapse of time between the date of accident and date of first hearing (a hearing is held in every case though generally only on the claim and affidavits) is between 37 and 38 days to which must be added an additional period for payment. It also showed the average interval between notification of accident occurrence and first payment to be 10 or 11 days, the difference (27 days) being chargeable to neglect on the part of those who should notify the fund.

When commenting on these figures, the Special Massachusetts Investigating Commission aforementioned points out that in Massachusetts, where no state fund exists, the record of stock and mutual companies "is almost exactly twice as good" since the "average time between the day of injury and the day of first payment was 18 9, or approximately 19 days, in 1,000 cases taken at random in the month of July, 1926, including cases in which there were disputes requiring either a conference or a full hearing to determine" [10]

[9] Ohio Actuarial Audit of 1926, previously cited A prior audit made in 1919 by E H Downey and Miles M. Dawson severely criticised the fund for its slowness

[10] "In 335 of these cases, or one-third, the checks were sent within 14 days In 419 cases the checks were sent between the fifteenth and the twenty-first day after the injury Thus, in three-quarters of the cases compensation began within three weeks of the injury, and within two weeks of the end of the waiting period It should be noted that the compensation for the first week is not due until the fifteenth day after the injury, that is, until the end of the first week after the waiting period

"In Ohio as much as 27 days elapse before the employee's formal claim is even received Yet we need not blame the employee Perhaps the red tape that requires a formality which the Massachusetts system is able to dispense with, but which is often unavoidable in a government department, is responsible In Massachusetts the insurance companies are on their mettle to operate more promptly not only on account of the competition between them, which has been confined to the service they render by forbidding any difference in rates, but also on account of the fact that they all know that they are always under the threat of state competition or even of exclusion in favor of a state fund

"To repeat, this question is practical, not theoretical, and the major, if not the only, reason against a monopolistic state fund is the ability which the insurance companies under our present system can demonstrate in fact to operate more expeditiously, more equitably, and more advantageously all round." Report of Special Massachusetts Commission, previously cited, page 26.

An analysis of the number of days elapsing between the date on which the accident report was received and that on which agreement was received, or first payment of compensation made, for 3,137 cases handled by the Pennsylvania fund during the period January 1, 1922 to August 31st of the same year, showed the following distribution.

Lapse Interval	Number of Cases	Percentage of Total
1 week and under 2	838	26.7
2 weeks and under 4	1,410	44.8
4 weeks and under 6	569	18.1
6 weeks and under 8	188	5.9
8 weeks and under 10	65	2.2
10 weeks and under 12	31	1.1
12 weeks and under 14	15	5
Over 14	21	7
	3,137	100.0

Of the total, agreements were received and compensation paid in 3,005 cases on an average of 28 days after notice of accident (not occurrence of accident), and in the other 132 on an average of 86 days. This is a better showing than is made by the Ohio monopolistic fund but that of New York (also competitive) is still more commendable.

According to the Manager of the New York fund,[11] it " does not wait for a hearing to initiate payments in admitted liability cases. In over 90 per cent of its compensable cases payments are initiated within three weeks after the receipt of notice of accident, and on fully two-thirds of this number payments begin within two weeks after notice of accident."

Follow-up on Payments

The paucity of data as to the adequacy of awards and promptness of payment is in itself confession of the fact most funds and industrial boards or commissions are not exerting every effort to follow through on their functions. The compensation laws were enacted to accomplish a definite goal and the agencies charged with the administration of those laws ought to know how nearly they are approaching it. It is their

[11] Report of New York Industrial Commissioner for 1926, previously cited, page 366.

duty to ascertain whether persons injured in the course of employment receive their periodic payments promptly and eventually obtain everything to which they are entitled Further, they should know whether the ultimate outcome of lump sum settlements is in conformity with the spirit of the law They should lay down regulations for reporting accidents which will guarantee immediate notice and then proceed at once to investigate and pay claims without involving the entire procedure in a mass of cumbersome red tape. Certain of these functions should be exercised by the administrative body, others by the carrier. The administrative body should establish a system of efficient accident reporting, set the standards for adequate and prompt payments, follow-up on settlements and maintain records as to the degree of compliance by the carriers. The carrier should constantly strive to meet or exceed the standards promulgated, by investigating claims promptly, and by initiating and subsequently continuing payments on all uncontroverted cases without waiting for formal action, so that such payments may actually take the place of wages as is contemplated by law A monopolistic regime does not lead to this end—a competitive one does Under the former, we find again two irreconcilable functions being performed by the same body with the result that standards remain low On the contrary, in the states where all business is handled by private companies or where the state fund must compete with them, there is a growing disposition to face and solve these problems.[12] No state fund operates in Massachusetts but awards there are carefully followed up[13] and, as we have found, payments are

[12] For a discussion of this subject, refer to the Proceedings of the Twelfth Annual Meeting of the International Association of Industrial Accident Boards and Commissions—August 17–20, 1925 Published by United States Bureau of Labor Statistics—Bulletin 406

[13] "Massachusetts has a consistent follow-up system on lump sum settlements, chiefly for the purpose of keeping members advised of the danger in permitting employees in all but border-line cases, where the burden of proof has not been sustained by them, to accept lump sum settlements . . .

"In other cases Massachusetts has a consistent follow-up through mail inquiry and visits from a staff of six inspectors Every amputation case is followed up, by mail or through a visit from an inspector, to see that all rights due under the statute have been safeguarded No suspicious case involving amputation of any portion of fingers, toes, hands, or feet, nor

made by private companies in one-half the time required by the Industrial Commission in Ohio. A system adopted in Wisconsin for checking up the promptness of payments led to a very surprising improvement in this connection[14] and reached the point in 1924 where insurance companies made almost forty per cent of their payments within two weeks after disability even though the first payment (covering the second week since there is a seven day waiting period unless disability exceeds three weeks) may be withheld until the fifteenth day. New York adopted a similar plan in 1925. Under the law there, payment must begin in uncontroverted cases within eighteen days of disability A carrier failing to comply with this provision becomes liable for a penalty equal to an additional ten per cent of the amount then due It must also report to the Industrial Commissioner the time when payment has begun, or if not paid within the limit set, file a notice of controversy, giving the reason. The intervals between dates of accidents and payments on account of them are tabulated for every individual carrier and periodic reports given to each showing the relative position among all carriers which it holds with respect to meeting the legal requirements[15] By virtue of competitive rivalry it is expected carriers will endeavor to improve their scores

any case involving reduction of vision, is allowed to be filed until routine precautions are taken. Every back case involving strain or injury to the back is similarly followed up. Every case involving future rights of young and inexperienced workmen is followed up, usually by a visit from an inspector Mail investigation is made only in the most trivial of these cases All cases in which there is even a suspicion that compensation may be due, or in which full compensation has not been paid, are investigated and steps taken to get them into a hearing stage, if, upon notification, insurers fail to pay in accordance with the statute In all cases under investigation steps are taken to write to employers, employees, and insurers—to the first named, to get information first hand about return to work; to employees, to verify facts; to insurers, for medical reports Inspectors get into personal touch with the parties and upon their reports further steps are taken, such as arranging for impartial reports, requesting insurers to make the payments indicated on the basis of reports made, and arranging for hearings when necessary"—Excerpt from address of Rowena O Harrison, Director of Claims Division of Maryland State Industrial Accident Commission, entitled "Follow-up and Investigation of Results of Compensation Awards," page 17 of Bulletin cited in preceding footnote

[14] Refer to statement of Fred M Wilcox, Chairman of Wisconsin Industrial Commission, page 27 of Bulletin just cited

[15] Report of New York Industrial Commission for 1926, previously cited, pages 3–7.

Though it is true that such activities as these are functions of a compensation administrative body rather than of fund operating officials, it is also true that they have developed only where competitive conditions reign. Private carriers, self-insurers and state funds are all stimulated by them since the public will soon recognize which are really furnishing that intangible commodity styled "service." But such "service" is costly, and as will be noted later, the expense ratios of those funds which endeavor to provide it are the highest in the country. They cannot afford to economize at this point lest private carriers get the business. It is to be regretted that most funds, competitive as well as monopolistic, are not subject to the same stimulus and while they keep expense ratios lower, injured workmen continue to bear the burden of their neglect.

CHAPTER VI

WORKMEN'S COMPENSATION FUNDS

MEDICAL AND REHABILITATION SERVICE

Whether viewed from the standpoint of an insurance carrier or an injured workman, prompt and capable medical attention is of prime importance in order to prevent infection and to expedite recovery, since minor injuries might terminate in serious disability or death if neglected The compensation law obliges the employer or his insurance carrier to supply such medical, surgical, nursing and hospital service as the nature of an injury and the treatment of it may warrant In eleven states there is an absolute limitation upon the length of time during which benefits *must* be furnished as well as upon the amount of expenditure for them; in four, there is a limitation upon the time only; in five, upon the amount; whereas in fifteen, either one or the other, or both, may be restricted, but the commission is vested with authority to require additional service Medical benefits provided by the remaining eight (43 states of the Union have compensation laws) are unlimited. It is interesting to observe that there has been a decided tendency in recent years toward liberalization. This is reflected in the establishment of much higher limits, and in some cases, their complete removal

The laws of states having compensation funds allow, on the whole, very substantial amounts for the treatment of injuries. A tabulation of the maximum limits appears in Table XII. It will be apparent from the table mentioned that the monopolistic funds are given considerable leeway as to the extent of the medical service they may render. More restrictions are found on the liability of the competitive funds and private carriers operating in the same states. But even though these are not obligated to furnish medical benefits beyond the statutory requirements, they all, quite generally, claim to furnish

TABLE XII

LIMITS ON TIME AND AMOUNT OF MEDICAL BENEFITS IN COMPENSATION FUND STATES DURING 1926

Monopolistic Fund States	Maximum Period	Maximum Amount	Competitive Fund States	Maximum Period	Maximum Amount
Nevada	6 months	No limit	Arizona	*90 days	No limit
North Dakota	No limit	No limit	California	No limit	No limit
Ohio	No limit	$200	Colorado	60 days	$200
Oregon	No limit	$250	Idaho	No limit	No limit
Washington	No limit	No limit	Maryland	No limit	$500
West Virginia	No limit	$1400	Michigan	90 days	No limit
Wyoming	No limit	$300	Montana	6 months	$500
			New York	No limit	No limit
			Pennsylvania	30 days	$100 and Hospital
			Utah	No limit	$500

* May be extended by Commission.

whatever treatment may reasonably be expected to hasten recovery or reduce the permanent effects of the injury, regardless of expense, and there is reason to believe they usually do so The Pennsylvania fund constitutes at least one exception, since the Attorney General of that state has ruled that the State Workmen's Insurance Board has no authority to permit the fund to expend more than the maximum even though the furnishing of additional attention would ultimately effect a saving

GENERAL PROCEDURE

It is the common practice of all state funds to require detailed reports from physicians attending workers who come within the scope of the acts These are designed to set forth the nature of the injury, the manner of its occurrence, the medical treatment necessary and the probable type and duration of disability In serious cases, supplemental reports are filed from time to time and a final statement is made when the patient recovers or the physician believes further treatment will not improve his condition. A fee schedule is generally adopted by the commission in accordance with which doctors are paid for their services. Exceptions from this basic schedule may be allowed when the commission feels a larger fee is justified

Where no fixed scale of payment has been promulgated, the bill must be reasonable and not in excess of the amount charged other people in the same locality for similar services. The Oregon fund employs some doctors on a contract basis to treat all cases sent to them.

When employers maintain their own hospitals or execute contracts with hospitals in the vicinity to take care of all their workmen who may be injured, special consideration is given them by some funds This practice is of sufficient importance, however, to warrant separate discussion

Upon the receipt of bills from physicians or others for medical, surgical and hospital services rendered, the usual plan [1] is to check them against the doctor's reports and the fee schedule and then to mail a check for the amount unless some irregularity is discovered. Most funds have a doctor who serves as medical director, or engage one on a part time basis, to pass on bills, to examine injured workmen in contested cases, to rate disabilities, and, generally, to function in an advisory capacity. Where this is not done, the fund is ordinarily small in size, as in Colorado and Michigan, but even in such cases it would seem desirable to have some member of the medical profession attached to the funds, if only for purposes of consultation.

Hospital Contracts

Most state compensation funds cover both compensation and medical costs in the rate charged employers. No reduction is made if the employer has his own hospital or desires to contract with one nearby to look after his workmen. The cost may not be passed on to the employee by deductions from wages. But there are some important exceptions.

Monopolistic

Several of these exceptions are found in the states having monopolistic funds. The Nevada fund makes an extra charge for medical service (called accident benefits in its law) which is equal to one-half the rate for compensation. A separate

[1] Payment of all bills for medical aid must be ordered by District Courts in Wyoming.

account is then maintained for handling these premiums Employers wishing to do so, may be relieved of paying the accident benefit (medical) charge by agreeing to supply their own hospital service or to combine with others for furnishing it jointly, subject in both instances to the approval of the Industrial Commission. The large extent to which this practice is followed is evident from the fact that while the premium rate for accident benefits is one-half that for compensation, the receipts of the accident benefit fund are only one-seventh of those for compensation. Employees may be required to contribute as much as one dollar per month for these benefits.

The Oregon plan differs slightly. If an employer wants to take care of his own men, the fund will make a contract with him to that end The fund may also employ nurses for various establishments, if the commissioners feel that the expense is justified, and hire doctors on contract to look after all workmen in a given group In the latter event, the doctor is paid at the rate of two cents per day for each workman. Accounts are not segregated, as in Nevada, but medical as well as compensation costs are all paid from the same fund. Employees coming within the law contribute one cent a day, regardless of occupation, towards the cost of insurance, but their contributions are not segregated for medical attention alone

The expense of medical aid is shared jointly by employers and employees in the state of Washington, each bearing one-half All compensation costs must be borne by the employer. Each workman is charged a certain amount per day, the rate depending on occupation, which is paid into a separate fund, as in Nevada, unless permission is given for a hospital contract. If an employer elects to provide the medical service himself, he must nevertheless pay to the fund an amount, equal to ten per cent of what the total medical aid premium would have been, for the purpose of covering administrative costs.

The Ohio and West Virginia funds do not grant ex-medical rates though employers who wish to have their own hospitals, because of the effect on morale of workmen or experience rates, may do so. The costs are not borne by the funds though in

West Virginia they may be passed on to employees if the latter subscribe to the hospital service. The inducement to a West Virginia employee for being put on the hospital list is a promise of medical treatment (covering sickness as well as accident) for himself and family in return for a payment of eighty cents to a dollar per month. Under a provision of the compensation law denying medical, surgical or hospital service to an employee on such a list, the fund can do nothing for him if the treatment given by the contract hospital is inadequate. This hospital contract may work a hardship upon an employee and perhaps effect no saving for the fund.[2] The former is particularly regrettable in a state where the maximum limits for medical benefits are so high.

Competitive

As is the situation with the monopolistic funds, the competitive ones which have adopted the hospital contract system are located in the far West. The Arizona fund operates a separate account for accident benefits (medical) to which employees contribute one-half the cost, but not exceeding one dollar per month each, employers paying the balance. The rate for medical aid is a flat twenty per cent of that for compensation, but if the employer runs his own hospital or has a con-

[2] "The employee pays from 80 cents to $1.00 a month for hospital service for himself and family. The average family has five members. This hospital service is to include care of all diseases and injuries, except contagious diseases and non-complicated maternity cases. It is an utter impossibility for an institution with the average number of contract cases to fulfill these contracts to the best advantage of the injured employee.

"The contract hospital, as a rule, usually discharges each injured man or woman at the earliest possible moment. This is necessary to make room for the next patient and also to save expense. Such hurried care often results in permanent and partial disabilities.

"The underlying principle of all compensation laws is that the subscribers pay for all medical, surgical and hospital treatment. By so doing, you assume the responsibility, you secure for your employees better and more efficient care. You cannot expect contract hospitals to secure proper equipment and obtain competent surgeons and give the kind of service that is expected.

"You (employers) do not pay one cent for hospital and medical treatment directly; but you do pay indirectly for it many times over by increased permanent disabilities, which increase your rates." Observations of Medical Department of West Virginia Fund, Annual Report of State Compensation Commissioner of West Virginia, 1925, page 126.

tract with one in his vicinity to care for those injured in his establishment, subject to the approval of the Industrial Commission, he is relieved of any charge and is entitled to deduct the contributions of employees from their wages

The Idaho arrangement is somewhat similar although a separate account is not maintained. Employees there may be required to contribute up to a dollar and a quarter per month for medical aid If the Industrial Accident Board approves, the employer may contract to provide this service himself, and is allowed a twenty per cent reduction in rate for so doing. All the large employers covered by the fund have such contracts.

In Montana, an agreement may be made between the employer and employee and any physician or hospital association acceptable to the Industrial Accident Board for medical and hospital service covering both the injury and sickness of an employee This agreement may provide for assessing employees not to exceed a dollar per month unless the Board consents to a greater charge By this means the employer escapes the cost of furnishing medical, surgical and hospital service so it is not surprising that the plan has been widely adopted by policyholders of the fund At one time Utah had a somewhat similar system but the Industrial Commission abolished it on the ground that it was not accomplishing its purpose

In General

From the preceding summarization, it will be observed that the employer customarily receives a concession in his premium charge when a hospital contract system is operative, and in addition is permitted to collect certain contributions from his employees In return, he is obligated to supply either the medical, surgical and hospital attention necessitated by industrial injuries in his establishment, or, in addition, to look after the workman, and perhaps his family also, in case of sickness Where these plans are in force, they appear to favor large employers who may use them to pass medical costs on to workmen, instead of bearing such themselves, as is the general intent of compensation legislation that they should do Further-

more, there seems to be little or no oversight of the quality of service supplied, and, at least in some cases, fund officials frankly admit [3] employees suffer

Local conditions frequently render it imperative for an employer to operate a hospital to care for his own men. This is particularly true in mining or logging camps. But when such is the case, he should not be permitted to transfer the whole burden of its expense to workmen. Unless all employees are required to contribute towards the costs of medical service, as is done in certain states just mentioned, every employer should be obliged to shoulder an amount equal at least to the cost of the benefits prescribed by law and the employee's contribution should cover only the treatment for sickness or other expense not contemplated by the compensation act. If the em-

[3] "From the standpoint of the employer, hospital contracts are very desirable. Through them the employer escapes all liability and cost for medical, surgical and hospital service The burden of the cost is borne entirely by the workmen From the standpoint of the workman, as well as from the standpoint of the Industrial Accident Board, there is much to be said in favor of hospital contracts and a great deal to be said against them The arrangement possesses decided merit in that it furnishes treatment for workmen for sickness, which they cannot secure under the Compensation Act except through a hospital contract A decided disadvantage to the workman lies in the fact that he bears all the cost and, secondly, that the treatment which he receives following injury is not always of the highest standard It is difficult to eliminate the human equation. There is a tendency on the part of many contract doctors and surgeons to turn injured men out of hospitals while they still need medical and surgical care This is not true in the case of all hospital contracts, but it is true in the case of a sufficient number to bring dissatisfaction and bad results

"In cases where the hospital contract is controlled by the employer there is, many times, a tendency on the part of the contract doctor to favor the employer in the reports which he submits as to the nature, severity and duration of injury In cases where the hospital contract is controlled by the Union, as is true in the coal camps of the State, there is many times an inclination on the part of the contract doctor to favor the workmen as against the employer Neither of these conditions makes for fairness Both of them make it more difficult to bring about proper adjustments of compensation

"This Board has long been of the opinion that a more equitable and satisfactory result would follow if the law providing for the promulgation of hospital contracts were so changed as to require that employers and workmen contribute equally to these contracts and if the selection of the contract doctor or hospital were left in the hands of the Accident Board" Eleventh Annual Report of Montana Industrial Accident Board, previously cited, page 53

Author's Note The situation in West Virginia under hospital contracts, as described in the preceding footnote, is quite similar to that in Montana

ployer and his workmen are each chargeable with a definite proportion of the medical costs under the law, then the employer should still be required to bear the expense for his share of those benefits even though he has a hospital contract. In other words, all employers should be placed upon the same basis irrespective of whether they have hospital contracts or not, and in fairness to those not having such arrangements as well as in justice to workmen, any attempt to shift the incidence of medical aid expense should be defeated.

Follow-up on Medical Service

The funds have been just as remiss in checking up on the quality of the medical work for which they are paying as in following up on adequacy of awards and promptness of payment It would seem to be good business to have competent medical inspectors supervise treatments since that should tend to weed out inefficient practitioners and discourage the unethical ones who may be prolonging a patient's disability. Needless to say, if such service is to be of value, capable and experienced medical men must perform it. But here we meet two serious obstacles: first, the cost; and second, the disinclination of professional men with the qualifications enumerated to step on a political turntable. These factors apparently account for past neglect.

The Scope of Rehabilitation

Industrial rehabilitation has for its goal the restoration of persons injured in their employment to some useful and remunerative occupation by means of which they are enabled again to become productive members of society in spite of physical handicaps Frequently, the concept of rehabilitation is confined primarily to vocational training, but, in its broadest sense, several distinct phases may be distinguished. In the first place, rehabilitation may step in where medical aid ends and help to restore the use of certain members of the body which have been damaged. A badly injured arm, leg or back, for example, may be surgically healed but its function entirely

gone By means of physiotherapy and other specialized forms of treatment, joints which have become stiffened or ankylosed, and bones, nerves, tendons and muscles which have been impaired by fracture, dislocation, crushing, laceration or infection are restored as nearly as possible to normal Even when such physical reconstruction activities are conscientiously carried on, there will always be a large percentage of those suffering serious disabilities who will never be able to resume their previous occupations. Many of these, however, could be trained to perform some other duties so the second angle of rehabilitation is concerned with fitting disabled workmen for the occupations to which their aptitudes and physical condition appear best to adapt them. The third naturally follows from the second since it entails the placement of physically reconstructed and vocationally retrained men in positions where they are enabled to gain a livelihood

The idea of rehabilitation was the focal point of considerable attention immediately following the World War because of the necessity for training disabled soldiers and sailors so they would be fitted to engage in some particular occupation after their return to private life Federal legislation designed to set up an organization as an instrumentality for attaining this object was enacted in 1918. A recognition of the even more serious problem entailed by industrial accidents led, two years later, to the passage of an act "to provide for the promotion of vocational rehabilitation of persons disabled in industry or otherwise and their return to civil employment." This was subsequently amended.

Federal Plan for Civilian Vocational Rehabilitation

Under the present measure, an appropriation is authorized by the Federal Government of $1,000,000 "for each of the fiscal years ending June 30, 1925, June 30, 1926, and June 30, 1927, and thereafter for a period of three years." This annual sum is to be allotted to the states in the proportion which their population bears to the total population of the forty-eight states. Actual expenditures, however, are conditioned

upon the state contributing a like amount to be used only for the special training of the disabled party and not for living or other maintenance expenses during the period of rehabilitation To secure the benefits of the Act, a state is obliged to accept its terms and designate a state board which shall submit for approval its plans of operation to the Federal Board for Vocational Education Cooperation in the care of the industrially disabled is contemplated by providing as a prerequisite for Federal aid that "in those states where a state workmen's compensation board, or other state board, department or agency exists, charged with the administration of the state workmen's compensation or liability laws, the legislature shall provide that a plan of cooperation be formulated between such state board, department or agency, and the state board charged with the administration of this act, such plan to be effective when approved by the governor of the state " [4]

The inter-relation between compensation and rehabilitation is clearly recognized by this section of the act However, the evidence available does not indicate that everything has been realized from the government plan which might logically have been expected But it is not our intention to discuss the relative success of these efforts or the problems encountered. On the contrary, the scheme of operation has been outlined merely that it might serve as a background for consideration of fund activities of such a character

MONOPOLISTIC FUND ACTIVITIES

Of all state funds, the monopolistic are ideally situated to utilize the assistance afforded by the Federal rehabilitation plan. Insuring, as they do, the entire compensation business of their respective states, they are in a position to formulate a constructive, unified rehabilitation program which would reach the great mass of those who need such service. If properly conducted, this could serve to lower the costs of compensation as well as contribute distinctly to the general social welfare.

[4] Public No 236, 66th Congress, as amended by Public No 200, 68th Congress, Sec. 3, Par. 3.

But most monopolistic funds have done nothing,[5] either for lack of enabling legislation, or because of the expense entailed. The North Dakota law, it is true, does contemplate such activities,[6] but thus far, only one man has been assisted. The one outstanding exception to the general backwardness of monopolistic funds in this respect, is Oregon Physical and vocational rehabilitation are not only provided for by law,[7] but the Industrial Accident Commission which administers the fund has opened a physiotherapy department in Portland where two surgeons and twelve assistants daily treat from

[5] The Ohio fund, largest of all the monopolistic, is typical Reference to its lack of a rehabilitation program appears in the recent (1926) audit, previously cited. Several excerpts follow.

"As far as we were able to observe, no active sustained regular program has been installed for the rehabilitation of injured workmen Our inquiries brought forth the reply that the rehabilitation work of the fund consisted in getting an injured workman a job when he was able to go back to work, which is a far different matter from putting forth the best effort to get a workman into such physical shape that he can go back to work The salaries are limited.

"Rehabilitation service organizations have been the natural accompaniment of workmen's compensation conditions, and in a few places active rehabilitation programs are being maintained The physicians and surgeons engaged in this work are specialists in physiotherapy, and in the use of electricity for medical purposes In their places of business are installed machines for the re-education of disabled members of the body, the flexion of joints stiffened by ankylosis, ovens for baking portions of the body when such treatment is necessary, X-Ray apparatus, electrical devices of all kinds for use in medical work, etc From our own personal observation we have known numbers of workmen who have been considered irreparably disabled, either partially or totally, being rehabilitated so as to again occupy their accustomed stations in production Such results are not hypothetical or suppositious, nor based upon hope The record is that of actual accomplishment.

"From humanitarian standpoints, we recommend some such program In addition, the rehabilitation of an injured workman who is considered permanently disabled, cuts off compensation benefits, therefore lessens compensation costs and lowers the premium rates for compensation. The interesting thing about this is that the saving in the cost of compensation benefits is usually many times the cost of the rehabilitation treatment

"As an illustration, to bring this point home, let us say that a permanently incapacitated workman is in receipt of $15 weekly benefits, which would continue for, let us say, six years The total cost in compensation would be $4,680 If the rehabilitation cost on such a case is $500, the saving in actual cost is at once apparent" Pages 55 and 56.

[6] "Paragraph H It is hereby declared to be the intent of this act to restore to industry those injured in the course of employment. The Bureau shall accordingly assist industrial cripples to obtain appropriate training, education and employment, and may cooperate with the Federal Board for Vocational Education for this purpose." Chapter 162, 1919 Session Laws of North Dakota, and as amended, Section 4, Par 4.

[7] See Oregon Workmen's Compensation Law, Section 6628, third paragraph, and Vocational Rehabilitation Act, Section 6655 to 6659, as amended by Chapter 4, Laws of 1921

seventy-five to one hundred men coming from various parts of the state; and where a vocational director endeavors to assist those who may be able to profit by retraining in some other occupation Thus far, this privilege has been extended only to those who are injured so seriously that their disabilities will extend forty months or more According to a report of the Commission,[8] "In this work vocational advice and guidance and financial aid to cover tuition, supplies and maintenance have been furnished to a total of 292 workers with serious permanent disabilities. Of this number, three died, 51 were dropped because of unsatisfactory developments and 189 finished their training, while on February 1, last, 49 were in active training. The total expended for this purpose has been $219,035 85" The assistance described can be extended over a retraining period of eighteen months A small proportion of the cost is borne by the Federal Government (federal aid is available only for tuition, supplies, transportation and administration but may not be used for maintenance whereas the Oregon experience shows that living expenses constitute three-fourths of the financial problem in vocational rehabilitation) but the larger share is paid for from the compensation fund. Since the money of the fund is applicable only to cases where the injured person falls within the compensation act, the physiotherapy and vocational training departments have been handicapped in extending similar assistance to others outside the law This could be overcome by a special state appropriation, matchable from federal funds so far as the expenditures for such purposes would come within the scope of the federal law As respects industrial workmen, however, the present system appears to be functioning very successfully.

Competitive Fund Activities

The compensation laws of Arizona[9] and New York[10] contemplate rehabilitation activities and provide funds for that

[8] Report addressed to the Members of the Legislative Workmen's Compensation Committee in February, 1926

[9] Workmen's Compensation Law of Arizona, Section 70, Subd. A 9

[10] Workmen's Compensation Law of N. Y, Section 15, Subd. 9

purpose by requiring an employer or his insurance carrier to pay a stipulated sum ($850 in Arizona, $500 in New York) into a special state rehabilitation account for every industrial injury causing death where there are no dependents At one time the California law stipulated that $300 must be paid under similar conditions, but this was held unconstitutional. Other compensation fund states, as Idaho, Montana and Pennsylvania, have appropriated money for rehabilitation service in order to reap the advantage of the federal grant, but such sums are not confined to the use of those persons who come within the scope of the compensation law.

When rehabilitation is handled by a separate agency, as is true in competitive fund states, with but two exceptions nothing is done by the state fund along similar lines. Although the section of the California act pertaining to this was held unconstitutional, the fund there does have two women rehabilitation agents to supervise such service and the actual work is done by private institutions under their direction. The cost is charged to medical benefits The New York fund operates a physiotherapy station where from six hundred to seven hundred treatments are given monthly. The Bureau of Industrial Rehabilitation in Montana was attached to the Industrial Accident Board (also in charge of the State fund) in 1922 but its support comes from special appropriations, so it has no direct relationship to compensation. The money available for promoting this service has been limited and only a small percentage of those vocationally handicapped have been able to receive the benefits of the act Success is claimed for the activities performed.[11]

In General

From an economic point of view, the idea of rehabilitation is sound Like accident prevention, it may be regarded as an outgrowth of compensation And, like accident prevention, when embodied in a sensible, consistent and well-operated program, it tends to reduce compensation costs and to pay for

[11] Eleventh Annual Report of Montana Industrial Accident Board, previously cited, pages 88–92

itself in dollars and cents, besides contributing to the well-being of those whom it has reached

Enforcement of safety codes by state agencies has not proved adequate alone for meeting the problem of industrial accident prevention. In course of time, the public has come to recognize that the service rendered by insurance carriers fills a distinct need. Rehabilitation is a more recent development but the experience available indicates that it is passing through the same transitional stage. It also indicates that, for the most part, state funds, because of legislative restrictions, budgetary limitations or other reasons, are still backward in the adoption of progressive ideas, and delay any action until forced to it. The system of federal aid has perhaps tended to make fund officials view rehabilitation as a separate issue, separately provided for, but this can not excuse their neglect in failing to work out some constructive plan by which they might assist the crippled workers of their states and take advantage of federal assistance in doing so.

CHAPTER VII

WORKMEN'S COMPENSATION FUNDS

FINANCIAL STABILITY

Workmen's compensation legislation charges employers with the responsibility of paying the benefits stipulated in the act. Under the monopolistic state fund laws, employers are liable collectively, whereas under the compensation laws generally, each employer is liable individually for the compensation due to his own employees only. As has been previously set forth, the employer is ordinarily required to guarantee his ability to meet this obligation by insurance or other means. But as has likewise been heretofore noted,[1] the carrying of compensation insurance does not generally relieve him of the underlying responsibility, if for any reason the carrier is unable to fulfill its agreement Accordingly, the failure of an insurance carrier may seriously embarrass an employer who has honestly endeavored to supply protection for his workmen The factors determining the financial stability of state funds are therefore of more than passing significance. Primary among them is the collection of an adequate premium This subject has been reserved, however, for a subsequent chapter pertaining to cost and its distribution Attention will be confined immediately to a consideration of other solvency determinants

RESERVES

The reserves customarily held by compensation insurance carriers are of three types—unearned premium, loss, and catastrophe. As its name implies, the unearned premium reserve is designed to establish as a liability those premiums which have been paid in advance by the policyholder to cover protection receivable in the future and which premium the carrier

[1] See Chapter II, footnote 4.

can not rightly consider to be earned until the service is rendered The loss reserve—perhaps the most important of all—is intended to measure the carrier's liability to injured employees or their dependents for payments still due them but which will be made in the future The catastrophe reserve also looks to the future as it is set up for the purpose of meeting claims that might arise from some extraordinary disaster. As will become evident in the ensuing sections, not all state funds recognize the necessity for certain of these reserves which private companies have learned through experience to be indispensable.

Unearned Premium Reserves

Two of the monopolistic compensation funds—Washington and Wyoming—do not show an unearned premium reserve; the former because premiums are not collected in advance, except the initial premium on new risks, and the latter because premiums are collected monthly[2] The Oregon fund has an almost negligible reserve for the same reason.

[2] The premium payment plan obviously will govern the size of any unearned premium reserve For that reason, the following information regarding the practices in vogue among the various monopolistic funds is presented

Nevada—A deposit premium for 60 days in advance is collected when the law first becomes applicable to a given establishment At the end of every month thereafter the employer is billed for the month's premium Failure to pay before the deposit premium is exhausted cancels the protection and places the employer back under the liability law with his ordinary defenses removed.

North Dakota—The premium is paid semi-annually in advance on estimated payroll, with subsequent adjustment on actual payroll basis

Ohio—A semi-annual deposit premium is collected in advance which is adjusted at the expiration of that period on the basis of actual payroll and an additional deposit premium for a similar time collected This amount is due within ten days after receipt of settlement sheet and if not paid within 30 days goes to the Attorney General for collection. The penalty for delay has only been invoked twice.

Oregon—No deposit premium is collected, but contributions covering the payroll for the month previous become due and must be paid between the first and fifteenth of the month If not paid within 30 days, the employer is sued, but as has been elsewhere noted, an injured employee is permitted to recover even though the employer is in arrears

Washington—When an employer first comes under the act, he is charged a deposit premium based on an estimated payroll for the succeeding four months This is adjusted at the end of that time on the basis of actual payroll No additional deposit premium is required, but at the end of each four months period thereafter, he is billed for a premium based on his actual payroll Suit is brought to secure unpaid

The Idaho and Montana compensation funds are the only competitive ones which do not set up an unearned premium reserve.[3] This may be justifiable since the methods of paying

premiums, but irresponsible employers often take advantage by paying the deposit premium and then pay no more until an accident occurs. Employees are protected nevertheless

West Virginia—A two months deposit premium is collected in advance and every month thereafter an additional premium is collected on the basis of that month's actual payroll If the premium is not paid when due, employees are given notice that their employer is out from under the act.

Wyoming—A premium is collected every month based on the actual payroll for the month preceding. Suit may be brought to recover overdue assessments

[3] A brief analysis of the competitive fund premium payment systems is set forth below:

Arizona—Collects an advance premium based upon the estimated payroll for six months. Thereafter an earned premium is collected quarterly. If the earned premium is more or less than the premium expected, the advance premium is automatically increased or decreased accordingly.

California.—An initial premium is collected on the estimated annual payroll and adjustment is made at the end of the year on actual figures. This practice is similar to that of private companies

Colorado—An advance premium based on an estimated payroll for six months is paid by each employer, which is adjusted at the end of that time on the actual payroll and a further deposit premium collected.

Idaho—Although a policy is issued for a period of a year, the deposit premium collected on estimated payroll may be for a month, three months, six months or a year, according to arrangements made with the fund. Adjustments on actual payroll are then made at the end of such periods. Big employers pay their premiums on a short term basis The law providing a penalty for delinquency in paying premiums has never been enforced, but if the employer fails to meet his obligation, he is given a ten day's notice of cancellation.

Maryland—A premium on four months estimated payroll is paid in advance. It is adjusted at the end of that time on the basis of actual payroll and a further deposit for four months collected While this is the general practice, some policies are on a monthly and others on an annual basis

Michigan—A deposit premium on estimated annual payroll is collected and subsequently adjusted on actual figures Some large contracts are on a shorter period basis

Montana—A deposit premium is collected in advance on three months estimated payroll and every two months thereafter, the employer is billed on his actual payroll for the preceding two months period At one time, this fund required no deposit premium, employers being billed every three months on actual experience, but collection losses were heavy so this method was adopted in lieu thereof

New York—Besides the plan of collecting premiums on annual estimated payrolls and adjusting at the end of the year, deposit premiums may be paid on a semi-annual, quarterly, or monthly audit basis In such cases, the deposit premiums are, respectively, 60 per cent, 33 1/3 per cent and 10 per cent of the total annual premium After the final audit for the policy year, the deposit premium is credited against the total earned premium as determined by the last audit and the policyholder's account adjusted accordingly

Pennsylvania—Employers are billed about the first of each October for

premiums to them do not result in large advance collections but a much more scientific and safer system would be to collect a larger initial premium and then carry the unearned portion on the books as a liability. An analysis of the Colorado and Utah fund balance sheets at the end of a calendar year discloses relatively small unearned premium reserves, but their size is attributable to the practice of having contracts on a semi-annual period basis terminating on June 30 and December 31.

Loss Reserves

The problem of establishing loss reserves which will be adequate and not redundant has for some time been confronting compensation insurance carriers and state officials charged with their regulation and supervision. Nor is its solution easy. One need not be surprised, therefore, to find the systems used by the different funds at variance, and to note dissatisfaction, as expressed by many of their managers, with the results achieved. Only a thorough actuarial investigation, necessarily tedious and expensive, could prove whether the reserves now maintained by the various funds will be sufficient to meet all obligations. Such a study is beyond the scope of this inquiry but it is in point to examine the principles adopted in setting up the reserves and also to note the assertions of fund officials as to their experience

Monopolistic—The following schedule summarizes the reserve valuation bases of the monopolistic funds.

the premium on the following year's estimated payroll. All policies are on a calendar year basis and will not go into effect until the premiums are paid Adjustment is made at the end of the year on actual figures

Utah—Ordinarily a premium is collected in advance on the basis of six months estimated payroll, being adjusted at the end of that time on actual figures, but on large risks a deposit premium of 10 per cent is required in advance and then a monthly premium is collected on the basis of actual payroll.

TABLE XIII

BASES OF CLAIM RESERVE COMPUTATIONS-MONOPOLISTIC FUNDS

State	General Method	Mortality Table Used	Remarriage Table Used	Interest Rate Assumed	Frequency of Revaluation
				Per cent	
Nevada .	Case	Danish[a]	Dutch[c]	3½	Annual
North Dakota .	Case	Danish	Dutch	3½	Semi-annual
Ohio	Case	Danish	[d]	3½	Annual
Oregon . . .	Case	American[b]	Dutch	4	Bi-ennial
Washington . . .	Case	American	Dutch	4	. . . . .
West Virginia . .	Case	American	[e]	4	Annual
Wyoming . . .	All payments, except those for temporary disabilities are in lump sums, so no reserves are set up.				

(a) Danish Annuitants Survivorship Mortality Table.
(b) American Experience Table of Mortality
(c) Remarriage Experience of Dutch Royal Insurance Fund.
(d) No remarriage features in Act.
(e) This fund uses a table based on its own experience.

In its annual report for the biennium closing with June 30, 1924, the Nevada Industrial Commission summarizes as follows its experience under the reserve valuation basis above listed.

"The practical application of this system of computing reserves, during our brief experience of seven years, has resulted in requiring annual revaluations far in excess of interest earnings at 3½ per cent, thus increasing each subsequent year the reserves provided during the fiscal year in which the original award was made; this procedure being in itself an acknowledgment of the insufficiency of the original award, and having the effect as well of destroying the value of our statistics covering compensation costs for fiscal periods. A study of the situation reveals a condition which requires careful consideration, as it can be relieved only by an extremely fortunate experience, or an increase in rates, and it shall be the policy of this Commission to insure the integrity of the fund by an increase in rates, should such action seem justified"

No change had taken place in these conditions when the writer visited this fund in 1926.

Difficulty has also been encountered by the North Dakota fund primarily due to the fact its monies have in the past all been deposited with the Bank of North Dakota which paid but 3 per cent interest on them for a time whereas 3½ per cent was

assumed for reserve valuation. An amendment to the law, effective July 1, 1927, now permits the Bureau to invest in bonds or certificates of indebtedness of the state or its political subdivisions.

In a late address, the permanent representative of the National Convention of Insurance Commissioners to the National Council on Compensation Insurance, referred to the West Virginia reserve method as follows: [4]

"Recently the fund has undergone two examinations, one by an actuary appointed by itself, the other under the auspices of a legislative committee The actuary found the fund impaired to the alarming extent of $5,000,000 The legislative committee found a surplus of $150,000, a margin the insufficiency of which the committee admitted, recommending that it be increased to $1,000,000. The difference in results was partly due to method The actuary estimated death benefits to widows with the help of tables derived from certain European countries as to probability of remarriage The legislative committee leaned heavily on West Virginia experience, good as far as it goes, undoubtedly, but hardly sufficient from the statistical standpoint to base conclusive findings as to solvency. It is quite probable, however, that the European tables did not properly measure the probability of remarriage in a mining state The condition of the West Virginia fund can hardly be set down with more exactitude than as somewhere between a $5,000,000 deficit and a $150,000 surplus It will be a matter of some interest to note if, how and when the surplus is raised to the suggested $1,000,000."

To all appearances, the reserves of other monopolistic funds are adequate though Ohio's is the only one which has had a recent independent actuarial study covering this point. In the report of its audit, previously cited, the fund is commended for the diligence with which every loss claim is included as well as for the procedure followed in setting up reserves.

Competitive—A greater variation in reserve methods is found among the competitive funds. As it would be more difficult to compare these in tabular form, a brief description of each is set forth below in lieu thereof.

Arizona—Case Method. Hinsdale's table, taking into account both remarriage and life expectancy, is used for widows;

[4] Excerpt from address of Hon Clarence W Hobbs delivered before the Tenth Annual Conference of Superintendents of Insurance of the Provinces of Canada, August, 1927.

the American Experience Table of Mortality for adult males; and the same method of computing expectancy for minors as is employed in New York. The interest rate assumed is 3½ per cent. No policy as to how frequently reserves are to be revalued has as yet been determined, but the Chairman assumes a revaluation will probably be made once in every five years.

California—The reserve is equal to 70 per cent of net earned premiums for the three preceding policy years, less losses and loss expenses paid. To this is added an estimate for outstanding claims on policies issued prior to that time.

Colorado—Case Method. The full amounts payable under death awards are set up as reserves without discounting. Permanent total disability reserves are valued semi-annually on the basis of the Danish Annuitants Survivorship Mortality Table and 3½ per cent interest.

Idaho—Case Method. A reserve for pensions to totally and permanently disabled persons and to widows is set up at time of award for full amount of payments, without allowance for interest. When a life income is promised, after a fixed number of payments, a reserve for all payments for the expectancy of life (determined from the American Experience Table of Mortality) is set up without regard to interest

Illustration: Computation of reserve for a payment of \$12 a week for 400 weeks and then \$6 a week for the rest of life, assuming employee is 45 at end of first 400 weeks

$$\begin{array}{rcr} 400 \times \$12 & = & \$\ 4{,}800 \\ 1274 \times \quad 6 & = & 7{,}644 \\ \hline & & \$12{,}444 \end{array}$$

If the original reserve established under this system is too large, no provision is made for revaluation or taking out the excess.

Maryland—Case Method The maximum amount of payments is set up as a reserve without considering interest or the probability of remarriage or death Annual revaluation.

Michigan—Case method The maximum amount of payments on all specific claims is set up as a reserve without allowance for interest or mortality On non-specific claims, the length of time for which disability reserves are calculated is dependent upon the doctor's estimate as to duration of disability, to which three weeks is added Claims are revalued monthly

Montana—This fund has two accounts, known respectively as "Industrial Accident Fund" and "Industrial Reserve Fund." All assessments are paid into the former and any surplus not needed to meet current monthly payments is transferred to the latter which is also augmented by interest earnings and underwriting profits The reserve bears no direct relation to the amounts essential to paying future claims, but the 1926 Report of the Montana Industrial Accident Board states, "This Reserve Fund is considerably more than sufficient to meet all the accrued liabilities."

New York—Case Method. Similar to that used by mutual insurance companies For death and permanent total disability cases, the Danish Annuitants Survivorship Mortality Table, Dutch Remarriage Table and 3½ per cent interest rate are used For permanent partial cases, the reserve is the total amount of compensation provided by law, less any payments. A special table is used for indeterminates and medical costs. Open cases are revalued quarterly

Pennsylvania—Case Method The maximum payments for which the fund may be liable are set up as a reserve without regard to mortality, but are discounted for 4 per cent interest, except reserves for indeterminates which are not discounted for either mortality or interest. Annual revaluation.

Utah—Case Method A reserve is established for maximum payments without allowance for interest or mortality. An arbitrary estimate of $9,500 is used for each total and permanent disability claim although the Industrial Commission uses a figure of $15,000 as its estimate of this liability Claims are revalued semi-annually.

Adequacy is claimed by all officials of competitive funds for

their loss reserves, though redundancy exists in the Idaho reserves, no legal provision having been made for withdrawing the excess resulting from its particular plan of valuation. The Montana method of estimating all liabilities and the California system of valuing claims outstanding on policies issued more than three years previous [5] are hardly to be commended for their scientific character.

The wisdom of using the Dutch Remarriage Table or the American Experience Table of Mortality for determining reserves is debatable since the former is generally thought to be unsatisfactory for application in this country, and the latter,

[5] Representatives of the California State Insurance Department examined the affairs of the Compensation Fund in 1925 They commented as follows on the system used for determining loss reserves on claims outstanding on contracts more than three years old.

"In estimating the present value of future payments on claims incurred, the Fund takes the gross total of expected payments, without any discount factor to make allowance for the fact these payments will be spread over a long period Claims outstanding on policies issued prior to 1922 are the only claims affecting the liability statement, and it is obvious that practically all of these are either permanent disabilities or death cases

"In the case of a death claim, or permanent partial disability of 70 per cent, the number of future payments is known and these payments are distributed over a comparatively short period of time In all such cases, the gross total of future payments has been included as a liability in accordance with the practice of the Fund The overstatement of liability on account of the absence of any discount factor is slight

"Where a permanent disability case is given a rating of over 70 per cent by the Industrial Accident Commission, the injured is entitled to receive 65 per cent of his average earnings for 240 weeks, and a life pension thereafter, the amount of the weekly pension payment depending upon the degree of disability.

"The method of determining the liability of the Fund in such cases has been as follows When the claim is incurred and a rating made, an individual estimate is made of the time the injured is likely to live, and the total of the payments which would be made him during that length of time is then set up as the incurred cost of the claim As payments are made, the amount paid is deducted from this original estimate and the balance is carried as a liability This method sometimes works out with inconsistent results, as the following illustration will show:

"On one pension case, the Fund is obligated to pay $9 23 per week for life to a claimant 48 years of age at the date of this examination, and 90 per cent disabled. On this claim a liability of $1,278 68 is carried. On another case, the Fund is obligated to pay $7 39 per week for life to a claimant 67 years of age, and 92 per cent disabled The liability carried is $3,380 78 The second claimant is 19 years older and is receiving 20 per cent less per week than the first claimant, the degree of disability being practically equal, yet the liability item for the life pension of the second claimant is over two and one-half times as great as for the first.

"All insurance depends upon averages, and it is felt the Fund should adopt some mathematical rule in determining liability set up for pension cases, instead of depending upon individual estimates"

while conservative for life insurance calculations is, by the same token, unsafe for annuity computations. A true gauge of adequacy should be based upon tables accurately measuring the remarriages or deaths which may be expected Furthermore, proper allowance should be made for concealed claims and indeterminates No evidence is at hand to demonstrate whether this is universally done

Catastrophe Reserves

Monopolistic.—All monopolistic funds, other than that of Washington, make some arrangement, ordinarily obligatory by statute, for meeting unusually heavy losses by the establishment of a special catastrophe reserve fund The amount of this reserve fund is fixed definitely at $100,000 in Nevada. In North Dakota a reserve of $250,000 is carried in lieu of reinsurance, and a statutory surplus, consisting of 5 per cent of premium receipts, furnishes an additional safeguard which at the end of 1926 amounted to $196,977 The catastrophe account of the Ohio fund is built up by allotting to it 2 per cent (at one time 10 per cent) of all premium collections, including those which self-insurers would have been obliged to pay at manual rates if they had been covered by the fund On December 31, 1926, it amounted to $3,269,188 An initial reserve of $50,000 was set up in Oregon to which 1 per cent of annual receipts is added, the whole on June 30, 1926, aggregating $67,237. The catastrophe fund in West Virginia is entitled to receive under the law 10 per cent of all premium collections until it reaches $500,000 when the allotment drops to 5 per cent On June 30, 1924, it totalled $173,700 but at the end of the succeeding year was not shown on the books. This fact, together with a marked decrease in the general surplus, suggests rapid depletion of the emergency funds. An unusual, though unscientific, scheme has been adopted in Wyoming to meet catastrophe losses, 25 per cent of the difference between premiums and awards being assigned to a special reserve for that object. No provision for a catastrophe reserve appears in the Washington law, but the fund is given

authority to levy a special assessment upon policyholders if need be, as was actually done at the time of the Ravensdale mine explosion in 1916 when 32 men were killed.[6]

A lack of any definite relationship between special reserves and possible catastrophe losses is noteworthy among a number of these funds but particularly so in those of Nevada, Oregon and Wyoming. Just how disproportionate a reserve of this type is with respect to the amount that safe operation appears to demand will be largely a matter of conjecture until a careful analysis of a carrier's risks from the standpoint of size, type, character and distribution is made Paradoxical as it may seem, a very large carrier, with numerous and well distributed risks, would need a smaller proportionate margin of safety in this regard than would a small carrier with a limited number of risks. Thus, the Nevada fund with fewer policyholders, many of which are engaged in the hazardous business of mining, would hardly seem to be justified in maintaining a catastrophe reserve bearing the same relation to its volume of business (measured by premium income) as the Ohio fund, with a much greater diversity of industries and individual risks Of course, a small catastrophe reserve does not in itself denote an unstable financial condition as it may be backed with a large general surplus and reinsurance However, the writer is inclined to believe that the setting aside of a fixed reserve, apparently deemed sufficient by lawmakers, has the effect of producing a false sense of security among some fund officials, particularly those lacking an insurance background.

Competitive.—The importance of accumulating in advance a reserve to meet catastrophe losses is recognized by all competitive funds.[7] Statutes creating the funds of Arizona,

[6] Since the contributors in any one class must bear all the losses of that class (see discussion of Washington's rating system in Chapter VIII), one concern was obliged to bear 85 per cent of the compensation costs arising from this catastrophe. For lack of cash, payments to dependents of victims were made in deferred warrants.

[7] Catastrophe losses of the Montana fund would have to be paid from the "Industrial Reserve Fund" which is in the nature of a general reserve and surplus account and bears no actuarial relationship to the claims which it is designed to meet. While the excess over known liabilities amounted to $322,951 on June 30, 1926, according to the Eleventh Annual Report, which is available to meet great calamities, there appears to be no legal requirement for maintaining a reserve for such purposes of this or any other size.

Idaho, Maryland, New York and Utah stipulate that 10 per cent of all premium receipts shall be allocated to a catastrophe reserve or surplus until this equals $100,000 ($50,000 in Maryland) when only 5 per cent is to be thus apportioned The minimum having been passed in all of these states, only 5 per cent of premiums is now being used for this purpose, except in New York where contributions were stopped in 1922 when the reserve totalled $850,000 Until the catastrophe surplus of the Colorado fund amounted to $500,000, at least 10 per cent of the earned premiums had to be set aside for it, whereas in Pennsylvania 5 per cent of the premiums was required by law to be set aside for the catastrophe surplus until $100,000 was reached The California and Michigan acts do not specify any set percentages or minimums although they do stipulate that premiums shall be sufficiently large to provide a reasonable surplus for meeting the catastrophe hazard. No accounting distinction is drawn by the California, Colorado, Michigan, Pennsylvania and Utah funds between their " catastrophe reserve or surplus " and the fund's " general surplus." The greater leeway allowed by the competitive funds in the building up of catastrophe reserves is evident, and assuming sound management and a sane policy as to size, should be conducive to safety

Other Catastrophe Safeguards

Surplus

The general surplus, except that definitely apportioned by participating funds for dividend payments,[8] is also available to meet catastrophe losses

Reinsurance

No monopolistic fund, other than that of Wyoming, reinsures any part of the risk. Wyoming has an excess loss reinsurance contract with a mutual company which assumes liability for any coal mining loss in excess of $25,000 and up to a maximum of $300,000

The competitive funds of Arizona, Colorado, Maryland,

[8] For a discussion of the dividend policies of various funds, see Chapter VIII.

Pennsylvania and Utah also carry excess loss reinsurance with either stock or mutual insurers, subject to the following limits: Arizona, \$25,000–\$250,000; Colorado, \$15,000–\$200,000 on coal mines and \$50,000–\$200,000 on other risks; Maryland, \$25,000–\$500,000; Pennsylvania, \$200,000–\$500,000; Utah, \$25,000—Unlimited on coal mines, and \$15,000–\$100,000 on other risks. No reinsurance is now carried by any other of the funds though the laws bringing them into existence may permit of it.

Summary of Provisions for Meeting Catastrophe Losses

In spite of efforts directed to their elimination, some disasters involving large loss of life and many serious injuries appear to be inescapable. If they can not be prevented (and no endeavor to that end should be spared) the carrier should at least be in a sound financial position to pay every claim in full when due. The status of the funds at the end of 1926 as regards the steps they have taken to meet unusual losses is covered in Table XIV. Total surplus available for heavy losses is compared with premium income to show how nearly it would approximate one year's premiums rather than to imply the necessity of maintaining some definite and direct proportion between the two.

A study of the table on page 88 indicates that the Oregon, Washington, and West Virginia [9] monopolistic funds are not well protected as compared with the others. The possibility of heavy mining losses in Nevada, such as resulted from the 1922 Argonaut mine fire in California, also raises the question whether its fund as well as the others just named might not find a good reinsurance treaty to be an important factor of

[9] The catastrophe hazard in West Virginia is typical of that experienced in many mining states. During the year ending June 30, 1924, there were 4 catastrophes in which 173 persons were killed. "In 132 of these cases, there were left as dependents 115 widows, 251 children and 17 parents Dependents in 41 cases are not established" During the year ending June 30, 1925, "two catastrophes occurred causing the death of 36 persons, leaving 22 dependent widows, 66 children and eight parents, with five cases having unknown dependents" Failure to reinsure such a hazard as this is inexcusable

TABLE XIV

Provisions for Catastrophes—1926

State	Premium Income (1926) (1)	Catastrophe Reserve or Surplus (2)	General Surplus (3)	Total Surplus Available for Catastrophes (4)	Ratio (4) to (1) (5)	Reinsurance (6)
Monopolistic					Per cent	
Nevada	$ 408,659	$ 100,000	$ 219,211	$ 319,211	78	No
North Dakota	445,526	446,977	230,084	677,061	152	No
Ohio	12,675,957	3,269,188	1,902,892	5,172,080	41	No
Oregon	2,529,837	67,237	322,315[a]	389,552[a]	15	No
Washington	3,601,084	None	Data unobtainable			No
West Virginia	4,185,875	None	35,868	35,868	1	No
Wyoming	434,447	297,309	[b]	297,309[b]	69	Yes
Competitive						
Arizona					.	Yes
California	6,012,684	2,382,099	Inc in Col (2)	2,382,099	40	No
Colorado	605,631	851,113	Inc. in Col (2)	851,113	140	Yes[c]
Idaho	326,489	162,665	309,690	472,355	145	No
Maryland	349,196	143,654	323,346	467,000	134	Yes
Michigan	480,290	313,635	Inc in Col. (2)	313,635	65	No
Montana	242,901	322,951	Inc in Col (2)	322,951	133	No
New York	6,949,772	850,000	897,663	1,747,663	25	No
Pennsylvania	3,687,999	3,146,521	Inc. in Col. (2)	3,146,521	85	Yes
Utah	323,864	281,490	Inc. in Col (2)	281,490	87	Yes

[a] Before dividends are payable legally, the surplus must amount to $300,000 and that surplus must be maintained by the fund. Presumably, it is available for catastrophes

[b] The General Fund, amounting to $34,833 on Dec. 31, 1926, while intended for "payment of awards, claims and items of expense," possibly had some element of surplus in it as well.

[c] Reinsurance not carried until 1927.

safety. Certainly there can be no doubt as to its necessity in West Virginia in light of the recent experience there.

The situation of the Montana fund has already been commented upon. Other competitive funds appear to be in a stronger position relatively than the monopolistic although one might well inquire whether Idaho and Michigan would not find it beneficial to follow the lead of the other small competitive funds—Colorado, Maryland and Utah—which have reinsurance contracts in addition to substantial surpluses.

UNFAVORABLE EXPERIENCE OF WASHINGTON AND WEST VIRGINIA FUNDS

Two of the monopolistic funds—Washington and West Virginia—have had more or less checkered financial careers and even today occupy no enviable position. The total claims paid (exclusive of administrative costs) by the Washington fund have exceeded premium receipts during each of the past three years. One of the reasons to which this is attributed by the present Director of the Department of Labor and Industries in his report covering the period January 1, 1925 to August 31, 1926, is the inadequate rate schedule adopted by the previous administration. But this cumulating deficit is not the first sign of trouble in the history of Washington's fund, for, as elsewhere stated, it had to assess employers at the time of the Ravensdale explosion in 1916. Other charges as to inefficient operation, inadequate reserves, delay in settling cases and failure to compensate injured workmen have also been brought against this fund [10]

Throughout its first four years of operation, the West Virginia fund showed a deficit ranging between $73,000 and $622,000 By June 30, 1923, this had been wiped out and a reserve for catastrophes of $513,214 provided in addition to $383,898 surplus Severe catastrophe losses reduced the reserve intended to meet such contingencies to $173,700 by June 30, 1924 and the surplus to $280,456, as elsewhere shown.

[10] Survey of the Washington Industrial Insurance Law (1919) by E. A. Sherman.

Subsequent heavy losses lessened these two accounts still more so that by June 30, 1925 the catastrophe reserve was exhausted and the surplus had dropped to $150,271. By June 30, 1926, this surplus, as shown in the fund's annual report, was further reduced to $35,868 As previously indicated, there is a question whether a substantial deficit does not actually exist. Certainly, the statement of Actuary Emile E. Dawson, who made an actuarial examination of the fund as of June 30, 1925, is weighty evidence to that effect. In a letter to the 1927 Joint Legislative Investigating Committee,[11] he said:

"The West Virginia Workmen's Compensation Fund has had only one actuarial examination in its entire history, which was made twelve years after the fund became operative, and this actuarial test found the fund to have a deficit of $4,711,995 as of June 30, 1925, as against which your committee, purely as laymen, attempted to show the fund with a surplus of $150,271."

"The West Virginia Workmen's Compensation Fund has not had a revision of its basic rates since 1917 up to the time of my recent examination of the fund, made in 1925. The Legislature made heavy increases in the scale of benefits of the fund in 1923. It increased the pension to widows 50 per cent, from $20 to $30 a month; it increased the maximum weekly compensation benefits 33 1/3 per cent, or from $12 to $16 per week; it increased the maximum percentage of wages 33 1/3 per cent, or from 50 per cent to 66 2/3 per cent; it increased the maximum medical and hospital benefits from a maximum of $300 to a maximum of $900, and in 1925 from a maximum of $900 to a maximum of $1400

"How can the West Virginia Workmen's Compensation Insurance Fund, with all of its many disastrous and costly catastrophes, with its high scale of benefits to the claimants of the fund, provide the coal operators of West Virginia their workmen's compensation insurance at a rate of $1 57, which was the average premium rate actually paid into the fund by the West Virginia operators under the rating system of the fund for the four-year period ended June 30, 1925, when the actual coal mining loss rate in Ohio is $4 83, where there has not been a single serious coal mining catastrophe against the Ohio fund, when the coal mining rate of Kentucky is around $11 and the coal mining rate of Virginia around $6, with a demand in Virginia for an increased rate of over $9?"

Competitive funds as a whole have a much better record, though at least two of them, in the course of their existence, have barely escaped insolvency.

[11] Extracted from New York Journal of Commerce, November 9, 1927.

Private companies encountering difficulties similar to those of the Washington and West Virginia funds would long since have been taken over by receivers for their state insurance departments and it is even a question whether competitive funds experiencing like conditions would not have been forced to the wall by the withdrawal of policyholders. But monopolistic insurance funds are operated under different principles. In most cases they do not report to the state insurance department and if pecuniary troubles come, information regarding such is not given wide circulation. Furthermore, the employers subject to the law may be compelled to pay such premium rates in the future as will be adequate to wipe out past deficits That may not be good insurance but it is the way a monopoly functions in furnishing that service.

INVESTMENTS

From an accounting viewpoint, reserves and surplus are presented as liabilities and on the opposite side of the balance sheet are offset by assets, usually in the form of investments One may rightly inquire therefore as to how well a fund's assets are invested in order to gauge its stability, since an unsound financial policy might wreck an otherwise well-operated organization.

Officials Handling Investments

The accompanying tabulation lists the officials, boards or commissions charged with the duty of investing the assets of their respective funds.

Monopolistic

Nevada—Industrial Commission.
North Dakota—Workmen's Compensation Bureau
Ohio—Industrial Commission.
Oregon—State Bond Commission
Washington—State Treasurer.
West Virginia—Board of Public Works.
Wyoming—State Treasurer.

Competitive

Arizona—Industrial Commission.

California—Industrial Accident Commission, approving or rejecting recommendations of manager.

Colorado—Industrial Commission.

Idaho—Department of Public Investments; one man has charge who generally consults interested parties.

Maryland—Board of Public Works, consisting of Governor, State Treasurer and Comptroller.

Michigan—State Treasurer.

Montana—Treasurer of Industrial Accident Board, with approval of Board

New York—Manager, with approval of Industrial Commissioner and Insurance Superintendent.

Pennsylvania—State Workmen's Insurance Board, composed of Secretary of Labor and Industry, State Treasurer and Insurance Commissioner

Utah—Industrial Commission, with advice and consent of State Board of Examiners.

From the above, three distinct systems may be discerned: (1) investments are solely in charge of fund officials, (2) are solely in charge of other state officials, and (3) are in charge of fund and other state officials jointly The last would seem to be the soundest by affording a check upon the management and at the same time permitting it a voice in a matter of prime concern to it.

Legal Investments for Funds

The types of securities permitted as investments are very much restricted, being limited largely to federal bonds or bonds of the state and its counties, municipalities and school districts. Table XV summarizes the provisions of the various laws with respect to this.

An analysis of the investments at the end of 1926 or fiscal year projecting into 1926, when the fiscal and calendar year do not coincide, is presented in Table XVI, together with the other principal assets of the various funds as derived from their balance sheets, so far as the information was obtainable.

TABLE XV

INVESTMENTS PERMITTED BY LAW FOR STATE COMPENSATION FUNDS
1926

State	Bonds: Federal: Govt.	Bonds: Federal: Land Banks	Bonds: Own State: State	Bonds: Own State: County	Bonds: Own State: Municipal	Bonds: Own State: School District	Other Investments
Monopolistic							
Nevada	Y	Y	Y	Y	Y	Y	State and county bonds of other states. Bank deposits[a]
North Dakota							Funds are placed at 3 per cent interest in Bank of North Dakota[b]
Ohio	Y		Y	Y	Y	Y	Conservancy district bonds.
Oregon			Same as for savings banks				
Washington			Same as for permanent school fund				
West Virginia	Y		Y	Y	Y	Y	
Wyoming	Y		Y	Y	Y	Y	State, county, municipal and school district bonds of other states.
Competitive							
Arizona	Y	Y	Y	Y	Y	Y	
California			Same as for savings banks				
Colorado	Y		Y				
Idaho			Same as for savings banks				
Maryland			Same as acceptable by Equity Courts of Baltimore for trust funds.				
Michigan	Same as permitted for deposit by insurance companies with State Treasurer, namely, government, state, and Michigan municipal bonds.						
Montana	Y		Y	Y	Y	Y	Other securities approved by Industrial Accident Board
New York			Same as for savings banks				
Pennsylvania			Same as for savings banks				
Utah	Y	Y	Y	Y	Y	Y	First mortgages on real estate not to exceed 40 per cent of cash value.

Y indicates this type of investment is permissible.

[a] The law permits 15 per cent of funds to be deposited in banks at 3 per cent interest and 10 per cent at not less than 4 per cent. These must be secured by depository bonds.

[b] An amendment to the law effective July 1, 1927, permits funds to be invested in bonds or certificates of indebtedness of the state or any of its political subdivisions.

TABLE XVI

Composite Balance Sheet of Compensation Funds—1926

State	Bond Investments: Federal	Bond Investments: State, county, municipal and school district of own state	Bond Investments: State, county, municipal and school district of other states	Bond Investments: All Bonds	Other Assets: Mortgages	Other Assets: Cash and Bank Deposits	Other Assets: Accrued Interest	Other Assets: Premiums Receivable	Other Assets: Miscellaneous	Total Assets
Monopolistic										
Nevada	$ 272,444	$ 601,010	$124,224	$ 997,678		$ 155,847	$20,670	$ 37,909	$12,025[a]	$ 1,224,129[b]
North Dakota						1,584,607	26,846	12,107[c]	139	1,623,699[b]
Ohio		48,175,898		48,175,898		1,706,356	771,924	2,692,695		53,346,874
Oregon				5,307,232		210,782		71,658[c]		5,589,672
Washington										8,092,953
West Virginia		12,631,300[g]		12,631,300		340,384				12,971,648
Wyoming										332,142
Competitive										
Arizona										
California		6,311,608		6,311,608		183,415	106,056	288,899[d]	10,516	6,900,494[d]
Colorado				2,309,465		15,998	15,694	33,788[cd]		2,374,945[d]
Idaho	400	771,850		772,250	$52,800	21,936	22,251	51,959[c]	4,552	921,897[e]
Maryland	401,050	173,000		574,050		106,167	5,751	57,552	12,196	755,716
Michigan				640,238		41,620	10,500	126,835[d]		819,193[bd]
Montana	131,500	376,093		507,593		43,487		21,713[c]		572,793[b]
New York	3,261,420	7,575,963[f]		10,837,383		289,794	128,270	1,527,706[d]	4,431	12,787,584[d]
Pennsylvania				5,824,760	694,620	798,520	68,740	41,370[d]		7,428,010[d]
Utah	35,000	518,000		553,000		29,984	9,616	30,000[d]		622,600[bd]

[a] Office building

[b] The following funds show items for "Furniture, Fixtures and Automobiles" on their books in the amounts named. Nevada, $4,094; North Dakota, $7,834, Michigan, $17,246, Montana, $5,016, and Utah, $5,484 Since these are not ordinarily allowed as admitted assets, they are not shown in the table or included in the total.

[c] Cities, counties, school districts, irrigation districts, highway districts and similar public bodies pay their premiums in some states with warrants which may be registered and draw interest if they can not be met when due The following "Premiums Receivable" accounts include such items· North Dakota, $1,476, Oregon, $9,154, Colorado, $4,901 of miscellaneous warrants and $31,203 of public employer premium accounts, of which $3,120 were charged off in 1926 as uncollectible, Idaho, $46,881, Montana, $21,713

[d] Premiums more than 90 days overdue are not included in the "Premiums Receivable" column, or in the total They were as follows for the funds segregating this account in their balance sheets. California, $32,211, Colorado, $3,763; Michigan, $20,540, New York, $148,135; Pennsylvania, $249,798; Utah, $13,571.

[e] Total is $3,850 less than sum of all items because of deduction for doubtful notes, premiums and investments.

[f] Includes some bonds of other states and their political subdivisions.

[g] Includes small amount of industrial bonds.

Certain interesting conclusions may be deduced from a perusal of the preceding tables: First, the bulk of all investments are bonds, only two funds—Idaho and Pennsylvania—having any mortgages. Second, bonds of the federal government, while permitted as investments for every fund but that of North Dakota, are not popular, only Nevada, Maryland and Montana having any substantial share of their assets thus invested The low return and statutory provisions prohibiting the purchase of bonds above par are doubtless responsible, at least in part, for this. Third, the major portion of all bond investments are confined to the state wherein the fund is located, laws regulating the investments of most funds allowing no alternative. This violates a fundamental principle of sound investing, namely, territorial distribution. Fourth, practically all bonds are those issued by a public body, the West Virginia fund being the only one with any industrial securities. Fifth, the Colorado fund [12] is very much restricted as to the employment of its money and others have found it difficult to keep assets safely and profitably invested in the range of securities allowed. Sixth, a number of the western funds are carrying among their investments warrants of counties, municipalities, school districts, irrigation districts and highway districts given them in payment of premiums. Some of these have been carried a long time and are of questionable value.[13] Because of

[12] In his 1925 audit of the Colorado Fund, Albert H. Mowbray, Actuary, said: "Section 141 of the Workmen's Compensation Act restricts the investments of the Fund to United States securities and bonds and warrants of the State A separate statute prohibits the purchase of United States bonds above par All such securities are now above par and this automatically restricts the investments to State bonds and warrants. This is making it increasingly difficult for the Fund properly to invest its money. It would be inadvisable for many reasons to add real estate mortgages and commercial securities to the list, but I believe no loss would be sustained through investment with reasonable care in the securities of Colorado municipalities, excluding those indicating extravagance or not properly secured, which may, at times, be the case with bonds issued for certain types of local improvements The above reasons appear to make such broadening of its investment field imperative."

[13] The Mowbray audit of the Colorado fund, above cited, contains the following sections covering this point.

"42 Warrants of Doubtful Value Some of these warrants in item 31 are of long standing and may prove uncollectible through dissolution of irrigation districts, etc I have not scrutinized all these, but believe 10 per cent of those on hand is a fair estimate of this possible loss

"43. Due from Public Policyholders of Doubtful Collectibility. The

the manner in which obtained, the author has chosen to classify them in Table XV under the caption of "Premiums Receivable" rather than "Bonds."

In General

Limitation upon allowable fields of investment for state compensation funds is unquestionably wise It would seem, however, that narrowing the list to bonds of the federal government or public bonds originating within the state itself is unnecessarily restrictive.[14] Even though it is recognized that limitation of state fund investments to public securities creates an artificial market for public improvement bonds, thereby stimulating municipal extravagance and withdrawing money from taxable investments, a better distribution certainly could be secured if bonds of any state or its political subdivisions were permissible investments. This may encounter objections because of political considerations, in which case the poorer

difference in the nature of the public policyholders (the State and its Municipalities) from the private policyholders is such that the ninety day rule is hardly a valid basis for discriminating between good and bad accounts. For this reason the Fund made no deduction on this item on its statement as filed Some of these from small school districts can probably not be collected, and I have taken 10 per cent of the total item as a fair reserve for the uncollectible"

Idaho and Montana have also experienced losses on public warrants

[14] The type of bond list resulting is evident from that of the Utah fund on June 30, 1926, which is fairly typical of most of the smaller funds

Beaver City Water Works	$ 6,000	Linden Water	$ 27,000
Brigham City Water Works	20,000	Marysvale Water	5,000
Bingham City Water Works	23,000	Orem Water	30,000
Bingham Town Hall and Water	19,000	Parowan Light	24,000
Beaver City Refunding	28,000	Richfield Paving	30,000
Carbon County Road	10,000	Salem Water	21,000
Castle Dale Water	13,700	San Juan County Court House	36,000
Duchesne Water	14,000	Springville Public Library	2,500
Escalante Electric Light	13,500	Tremonton Water	20,000
Grantsville City Hall	1,500	U S Liberty Second	10,000
Honeyville Water	26,000	U S Liberty Third	10,000
Huntsville Water	20,000	U. S Liberty Fourth	15,000
Hurricane Water	14,000	Washington County School	8,000
Hyde Park Water	8,000	Wasatch County School	20,000
Hyrum Refunding	4,000	Wellsville Water	17,000
Iron County School	8,000	Myton Refunding	10,000
Koosharem Water	7,800	City of Garland Water	10,000
Levan Elect Light & Power	16,000	Town of Enterprise	5,000
			$553,000

selection of investments, with perhaps a less favorable return, must be charged up to state operation.

Rigid regulation as to types of investments would not appear to be sufficient in itself for safeguarding the fund's assets and preventing speculation. The California fund was very severely criticized for its actions along this line by General S H. Wolfe in his 1925 examination.[15]

[15] "We find, however, that during the years 1920, 1921 and 1922 a condition existed in the Investment Department which indicated that securities were being bought and sold for speculative purposes rather than for investment purposes. It goes without saying that the funds of an insurance carrier are intended for investment and not for speculation. The facts which lead us to conclude that the funds were used for speculative purposes are shown in the following paragraphs.

"Until 1920 all of the investments of the Fund were in government and municipal bonds and were bought direct from the political subdivisions that issued them, with the exception of a few securities purchased in 1919 from national banks In 1920, however, a marked change seems to have taken place in the handling of investments The mean amount of investments in the Fund that year was $3,994,154 During the year the securities sold (excluding redemptions) amounted to $700,000 and the bonds bought amounted to $1,782,500 In 1921 securities amounting to $2,659,250 were sold while in the same year securities amounting to $3,182,500 were purchased. It is a matter of interest that during the year indicated so many of the transactions were handled by one brokerage firm, for the records show the following:

Year	Purchases and Sales	Transactions Handled through the One Brokerage Firm
1920	$2,482,500	$1,274,500
1921	5,841,750	2,876,400
1922	2,669,500	846,000
1923	1,500,600	91,000
1924	1,358,500	39,000

None of the present Industrial Commission was in office prior to 1923

"One of the practices of the fund in disposing of its Victory notes should be called to your attention. After agreeing to buy a security on a certain basis of yield, it would then enter into an arrangement to pay a higher price for the security if the vendor would take in exchange Victory notes at a price higher than was obtainable in the market The net result of this was to put many thousands of dollars of new securities on the books at an inflated value and as the Fund carries its securities not at the market value but upon an amortized basis, many of these securities are still being carried at a larger figure than a legitimate purchase price would warrant. For example, . . .

"Bonds are carried by insurance companies either at market values or on an amortized basis; the Fund carries its bonds not at their market value but amortizes them on an incorrect basis, i e it does not extinguish the premium or accumulate the discount properly but merely by applying equal instalments year by year to bring the security to par at its maturity date.

"It was likewise noted that it was the practice in some instances to sell securities at a profit and within a short time to buy them back at the then market price, it not infrequently happening that the new purchase price was higher than the previous selling price As stated before, the funds of an insurance carrier—particularly one which is charged with the duty of

A quotation by a former manager of the same fund charging an attempt during his incumbency to bring political pressure to bear in the selection of investments has previously been cited [16] Only an analysis of the records could determine whether others are guilty of the same practice A safeguard previously suggested is to have some state official who is independent of the fund act jointly with the fund management in making investments. Moreover, all funds should be subject to regulation by the state Insurance Commissioner in the same manner as any insurance company admitted to do business in the state

Investments of private carriers operating under sound investment laws and competent state supervision are better selected, more widely distributed and offer a far more reliable source of security than those of many state funds. Furthermore, most of these investments have the advantage of a ready market and are better known to the investing public.

State Liability for Solvency

Many compensation laws have clearly denied the state's responsibility for the solvency of its fund while others are silent on this point, none definitely assuming it [17] If need be, the monopolistic funds and the Montana competitive fund can make good their shortages by assessments and the State Board of Examiners in Utah could authorize a deficit, to be taken care of from future premiums, but there seems to be little reason for thinking the states generally would come to the financial rescue of their funds although the action of New York in repealing in 1922 the clause denying such liability might be construed to that effect Conversely, failure on the part of states with hail and bank guaranty funds to fill up the gaps with taxpayers' money suggests the contrary Certainly, no reliance upon state aid as a factor of safety is warranted by the facts.

making periodical payments extending over many years to injured workmen and their dependents—should be invested in conservative securities and should not be handled in a speculative manner" Excerpts from 1925 Report of the Examination of the California Fund made by S H and Lee J. Wolfe. Pages 7, 8 and 9

[16] See Chapter III, page 28

[17] The interpretation of the Utah law is doubtful and the Supreme Court in Idaho has failed to pass upon the issue with respect to the state's liability under its law.

CHAPTER VIII

WORKMEN'S COMPENSATION FUNDS

COST AND ITS DISTRIBUTION

The making of compensation insurance rates which will produce sufficient revenue to meet all claims and expenses and yet distribute the burden equitably among various industries and different employers in those industries—the obvious goal of any sound rating system—is by no means a simple or an easy task The framing of correct classifications and the establishment of a just rate for each involve the compilation of extensive statistical records and the application of sound actuarial principles. Loss expenditures of past years must serve as a basis, yet they must be modified to meet changing conditions Data upon which the rate for each classification is to be based must be adequate in amount, yet it may be possible to secure such adequacy only by utilizing the experience of many states.

The complexities and expense of rate making early led private insurance carriers to combine their experience for this purpose Rating bureaus were organized which have passed through various stages of development tending toward centralization, until today one body, the National Council on Compensation Insurance, a non-partisan organization comprising all the leading casualty companies, makes compensation rates in 34 states, although there are a number of independent bureaus. The procedure for ascertaining the rate itself has also passed through different transitional stages and it is significant to note that the 1927 revision of the method adopted by the National Council is the first one designated by it as a " permanent rate-making method."

Rates ascertained by the present system are composed of two elements—pure premium and loading—the first being designed

to provide for losses and the second to pay costs of administration. The 1926 allowance for loading, amounting to 40 per cent of the gross rate, is based upon the following estimated distribution of expenses.

Acquisition	17 5%
Claims Expense	8 0
Audits	2 0
Inspection	2 5
Home Office	7 5
Taxes	2.5
	40 0

Participating companies may not need as large a proportion for overhead costs, in which case they may distribute the excess as well as any savings due to favorable loss experience, in the form of dividends.

With these prefacing remarks as to private companies' practices in mind, our attention again reverts to the funds and the manner in which they have essayed to apportion the burden of compensation costs The systems of classification and rating employed will receive first consideration.

Manual Rating

The number of classifications essential in order to distinguish accurately between the relative hazards of each separate industry, trade or process within a state will naturally vary. Jurisdictions with numerous and diversified activities will need a great many, whereas others with a limited range of economic interests will necessitate fewer. It is patent, however, that even where only one risk of a given character exists, it should have a separate classification and its rate be such as will measure the hazard over a reasonable period of time, as accurately as is humanly possible. The formulation of a scientific and workable classification system and the development of a just rate for each class is therefore attended with many vexing difficulties An interchange of state experience and ideas seems in most cases desirable for meeting the complexities of classification and rate making, but generally speaking, monopolistic funds rely entirely upon their own resources although

competitive ones cooperate with private companies in the support of associations organized solely for that purpose. A further study of the various systems reveals some significant facts

Monopolistic

The systems in use among monopolistic funds are so much at variance that a brief description of each is necessary to an intelligent comprehension of the manner in which monopolies have met one of the most perplexing problems incident to the writing of compensation insurance

Nevada—Nominally, all risks are classified into seven groups—mining, ore reduction; Nevada Consolidated Copper Company (a separate class was provided for this concern because the smaller mining companies were afraid its experience might possibly affect their rates adversely, a fear which its subsequent record would not warrant), railroads; public utilities; state, counties, etc ; and miscellaneous. In practice, a greater number of classifications is really followed inasmuch as rates for all but the mining group are based on those of California, with no allowance for differences in the laws. The manager illustrated the practice to the author by stating that if a particular concern, not in the mining group, applied for insurance upon commencing activities in Nevada, he would look up the rate quoted in the California manual for a similar risk and if he found, for instance, that it was $1.76, he would charge $1.75 The original rate for mining was based on that of Washington but it is now supposed to be predicated upon the actual experience of the mining group Judged by the divergence between the premium income on the one hand, and losses and expenses incurred on the other, this principle appears to be entirely ignored in practice Further reference to this point will be made subsequently No rate manual is published.

North Dakota—When the fund initiated activities in 1920, its method of classification was guided largely by systems of other states upon which it also relied extensively for relative rates Since then, however, it has devised a classification

schedule of its own, with 116 separate groupings, and every year makes rates for each on the basis of actual losses.

Ohio —The fund uses as a basis the classification of industries originally made by the committee of statisticians representing governmental bureaus and workmen's compensation statisticians and actuaries, as developed by the National Council on Compensation Insurance and the International Association of Industrial Accident Boards. Some changes and additions have been made to take care of the industrial situation as regards Ohio. Rates for 692 classifications were quoted in the 1926 manual These manual rates are pure premium rates based upon the relationship of aggregate incurred losses to aggregate payrolls for the preceding five years. A 2 per cent charge is added to this for catastrophes Where the exposure in any classification is not sufficiently large to warrant a rate produced from it alone, a special process is used Interest is taken into consideration The resultant rates are then checked with those for stock insurance companies in other states where the loss cost may be expected to be somewhat similar to that of Ohio After analyzing these data and taking into account the probable development of industrial conditions so far as they can be foreseen, the actuary makes the rates for the ensuing year Expenses of administering the fund are all borne by the state and raised by general taxation As previously noted, however, an addition of 1 per cent is now made to the rate for conducting safety activities In producing the initial premium for a new risk, a penalty of 30 per cent of the manual rate is imposed

Oregon —Rates are made on basis of state experience and readjusted every year They are quoted for 438 classifications.

Washington —At the inception of the fund's operations, a force of auditors was sent out to obtain data from employers in the state with respect to their accident experience This was used as the basis for rates The fund, however, had the assessment privilege which enabled it to make good any deficiencies. After the Ravensdale explosion of 1916, basic rates expressed as percentages of payroll were written in the law.

Industries are divided into 37 classes under the law (1926 edition) but many of these have sub-classes, the total of all such sub-classes for which rates are quoted being 100. When the amounts received in premiums are more than sufficient to meet losses, the assessments are lowered or no call made If not adequate, assessments are increased Each of the 37 class funds must stand on its own feet, the law specifically providing that "For the purpose of such payments into the accident fund, accounts shall be kept with each industry in accordance with the classification herein provided and no class shall be liable for the depletion of the accident fund from accidents happening in any other class Each class shall meet and be liable for the accidents occurring in such class."

West Virginia—Rate quotations for 94 classifications are published by the fund All of these rates are multiples of 5 cents, none being quoted in odd amounts. They are supposed to be based upon state experience and to be readjusted every year The latter practice is not consistently followed and the divergence between losses on certain classes and the premium receipts for such raises a question as to whether state experience or expediency is the principal basis for rate computations.

Wyoming—A flat rate of 1½ per cent is imposed upon all employments alike, to which an extra ¼ of 1 per cent is added for coal mine risks to pay for reinsurance. An individual ledger sheet is maintained for each employer. When the amount paid in by any employer in premiums minus losses paid to his employees and the charges made against his account to maintain the catastrophe reserve equals or exceeds 2 per cent of his annual payroll and is not less than $3,000 in amount, he ceases paying premiums until his payroll increases or losses reduce the balance below the limits named An assessment sufficient to make good the difference is levied in the latter event The rate is automatically jumped to 4 per cent whenever losses exceed premiums for any employer and is held there until the situation is reversed No further penalty can be imposed if this rate is inadequate

Competitive

Though classifications and rates of competitive funds are for the most part those prepared by the National Council on Compensation Insurance, or various rating associations affiliated therewith, some exceptions should be noted Accordingly, the practice of each fund is listed below.

Arizona.—Mining rates are based upon accident frequency and severity experience of that industry for the preceding three years, but National Council rates, minus a 10 per cent differential are used for other industries

California—Rates are made for the fund as well as private carriers by the California Inspection Rating Bureau which is affiliated with the National Council

Colorado—Rates of the Mountain States Rating Bureau, which is a branch of the National Council, are used by the fund as well as private carriers, but with a 15 per cent differential. Prior to 1924 the differential was 10 per cent When the fund does not want a particular risk, the rate is arbitrarily raised

Idaho—National Council rates were used for all classes when the fund began operations but in those classes showing any volume of exposure, rates are now based on actual experience and revised annually when necessary National Council rates, with a discount of about 25 per cent, are still used for others In addition to the regular rate, a $3 annual policy fee is charged

Maryland—At its inception, this fund used National Council rates with a 10 per cent differential, but now, while the National Council classification is still followed, rates are made on the basis of its own experience The superintendent estimates the general level is about 30 per cent below that of stock companies

Michigan—The National Council classification and rates are largely used by the fund as a guide in making its own The general rate level is estimated to be approximately 15 per cent less than conference.

Montana.—Under the original compensation law, there were 27 classifications with a rate fixed for each This was superseded in 1925 by adoption of the National Council classification and a system of rate making utilizing state experience Rates are varied from year to year and are estimated by officials of the fund to average 10 to 20 per cent less than those of private companies.

New York—Classifications of the Compensation Inspection Rating Board, affiliated with the National Council, are used generally, although the fund still has a number of special groups Originally, there were six general groups and a number of special groups but the latter became the object of legislative attack, especially after the Connor investigation and report. While the fund still retains these special groups, they have become relatively less important. In the early days of the fund, about half its premium income was derived from the special groups but only 23 per cent is now thus obtained Further reference to special groups will be made in connection with dividend payments. Although the fund still retains the legal right to make its own rates, it has not exercised it since 1917, except in the case of undesirable risks, rates of the Compensation Inspection Rating Board, with a 15 per cent differential, ordinarily being charged

Pennsylvania—The classifications and rates of the Pennsylvania Compensation Rating and Inspection Bureau are used. This is an independent bureau not associated with the National Council Its rates are derived from Pennsylvania experience A 10 per cent differential has been granted in the past to fund policyholders but by order of the state Insurance Commissioner, dated June 20, 1927, that practice ceased December 31, 1927.

Utah—The classifications and rates of the Mountain States Rating Bureau, affiliated with the National Council, are used except for a 20 per cent differential permitted to all fund policyholders.

MERIT RATING

Manual rates allow for the difference in accident hazard between industries but do not take into account variations of

hazards between plants in the same industry One employer may have exerted every effort to reduce industrial accidents or lessen their severity, whereas another may have entirely ignored the primary principles of safe operation Obviously, consideration should be given to these factors in the compensation insurance rate Accordingly, schedule and experience rating plans, designed to give an employer a rate above or below the manual rate, depending on whether his risk is better or poorer than the average, have been developed by private carriers.

Under a schedule rating plan, deductions from or additions to the manual rate are made if the physical hazards of a given plant or conditions under which employees work diverge from certain safety standards A drawback of this method is that frequently the exact effect which many factors, especially those of an intangible nature, will exert upon a rate can not be foreseen, and proof as to the relative hazards of schedule items is crude and approximate. Furthermore, conditions and hazards in some industries, such as contracting, change so rapidly as to render their measurement by means of a schedule impracticable Experience rating was devised to meet this since it bases the rate upon the experience developed by a particular risk during some sufficiently extended period. Its underlying principle is that the value of the experience increases with the size of the risk and its losses, as well as with the length of time for which statistics are available Both these methods of merit rating give employers the benefit in lower premiums for any steps they may take to prevent accidents, and if properly devised, should directly result in a saving of lives and limbs

With but few exceptions, the funds employ some plan of merit rating The principal characteristics of their various systems are set forth in Table XVII on the opposite page. A number of interesting deductions may be drawn from a study of this table.

TABLE XVII

MERIT RATING SYSTEMS OF WORKMEN'S COMPENSATION FUNDS—1926

State	Schedule	Experience				
		Minimum Size Premium to Which Applied[a]	Minimum Period for Which Data Must Be Available	Length of Period for Which Experience Is Used	Maximum Credit Deviation from Manual	Maximum Penalty Deviation from Manual
Monopolistic						
Nevada	No	No	No	No	No	No[b]
North Dakota	No	$75 (1 yr)	1 year	5 years	25%[c]	25%[c]
Ohio	No	No minimum	6 months	5 years	10–50%[d]	10–50%[d]
Oregon	No	$20 (1 yr)	1 year	5 years	20%[c,e]	No Penalty
Washington	No	No minimum	2 years	2 years	30%[c,f]	10%[c,f]
West Virginia	No	No minimum	1 year	1 year	50%[c]	100%[c]
Wyoming	No	[g]	[g]	[g]	[g]	[g]
Competitive						
Arizona	No	No	No	No	No	No
California[h]	Yes	$1,000 (3 yrs)	1 year	5 years	100%[d]	No limit[d]
Colorado[h]	Yes	$600 (2 yrs)	1 year	5 years	100%[d]	No limit[d]
Idaho	No	No	No	No	No	No
Maryland	No	$500 (1 yr)	1 year		9%[c]	30%[c]
Michigan	Yes	No	No	No	No	No
Montana[i]	No	No	No	No	No	No
New York[h]	Yes	$800 (2 yrs)	1 year	4 years	100%[d]	No limit[d]
Pennsylvania[h]	Yes	$200 (1 yr)	2 years	5 years	100%[d]	No limit[d]
Utah[h]	Yes	$600 (1 or 2 yrs.)	1 year	5 years	100%[d]	No limit[d]

[a] In case of risks that have been in operation more than one year, the aggregate premium for the number of years indicated in the parenthesis may be used to determine eligibility. If the risk has only one year's experience, the entire maximum premium must be developed within that year

[b] An increase of rate may be threatened, but the threat has never been executed

[c] The credit or penalty varies only as to relation of losses and premiums. The size of the risk is not a factor

[d] The credibility assigned to a risk's own experience increases with the size of the premium, therefore, the actual deviation from the manual will be governed by the size of a risk as well as the relation between its losses and premium. Although 100 per cent credit is theoretically allowable by the systems of California, Colorado, New York, Pennsylvania and Utah, the minimum premium rule still applies

[e] An additional five per cent is allowed for the creation of a safety committee.

[f] A risk must comply with educational requirements and safety orders to be granted any credit. The penalty is waived if safety work is carried on

[g] See previous discussion of the rating system.

[h] The schedule and experience rating systems are the same as for private companies.

[i] The law prevents the use of either schedule or experience rating.

Note. The data for the California, Colorado, New York, Pennsylvania and Utah funds were secured through the courtesy of Hon. Clarence W. Hobbs, Special Representative of the National Convention of Insurance Commissioners to the National Council on Compensation Insurance. Information for other funds was obtained from their respective officials.

Monopolistic

The Nevada fund offers no financial inducement to policyholders to prevent accidents nor does it penalize them for their indifference, while in Wyoming, a financial incentive for a good record is held out only to large policyholders although small ones are subject to penalty for bad experience under the operation of that state's very peculiar system. The fear of driving employers out from under the act is evident in Oregon where the fund levies no penalty for a poor record although credit is granted for a good one. It will be recalled that this fund subordinates safety activities for the same reason. In practice, the penalty imposed by the Washington fund means little since it is waived if the employer does safety work. Small deviation from the manual rates results from the plan of the North Dakota fund since the Basic Compensation Allowance Factor is determined by applying 60 per cent of the manual class rate to $100,000 of payroll, and credits are then given or penalties charged in the same ratio as 25 per cent of the difference between cumulative compensation costs (inclusive of medical, hospital and funeral expense) and the Basic Compensation Allowance Factor reduced to the same payroll bears to the latter. The maximum charge or credit is further limited to 25 per cent of the manual rate The West Virginia fund plan appears to penalize employers very severely for bad experience, but the practice of limiting the charge for each death or total permanent disability case to a maximum of $1800 (the excess is chargeable to the catastrophe reserve) in determining the experience rate for any risk must not be overlooked Thus, coal operators, who are already paying an inadequate manual rate, are further benefitted by the fact that the cost of their fatalities and total permanent disabilities is partly charged against the catastrophe reserve, which reserve is built up from the premiums paid by all policyholders, though it is almost solely used for paying coal mine claims.[1]

Statistical data as to the way in which merit rating has worked out in the various funds with respect to the offsetting

[1] Refer to subsequent section of this chapter dealing with rate inequities

of debits and credits, thus reproducing the premium volume at manual rates, are not available except for the Ohio fund which showed that for "1925 there was an excess of credit charges which was but 1.2 per cent of the premiums at manual rates; for 1924, but 2.1 per cent; for 1923, 4.7 per cent; for 1922, 4.7 per cent; and for the aggregate of the four years, but 3.2 per cent. This shows an increasing nearness to the ends desired." With the exception of Ohio, none of the monopolistic funds recognizes that a sound plan of experience rating should give credence to the experience of a given risk in proportion to the size of its premium and losses.

Competitive

The Arizona, Idaho and Montana funds have done nothing in the field of merit rating, and officials of the latter admit that their inability under the law to grant policyholders the benefit of safety measures and resultant good records has lost them some splendid accounts. There would seem to be little reason for the Michigan fund employing schedule rating, and ignoring experience rating, unless the former is used primarily for competitive purposes, but no facts are available on this point. The Maryland experience rating system which has been effective but a short time appears to offer small inducement for the risk with a loss ratio at about the average to exert much effort towards its reduction. All other competitive funds grant both schedule and experience rates in the same manner as do private companies.

DIVIDENDS

If premiums are redundant, the excess may be refunded to policyholders in the form of dividends. Dividend payments may also serve as a means of smoothing out inequities in rates if a sliding scale is used and refunds adjusted according to the experience of different classifications. Most funds, however, do not at the present time pay back any surplus in this manner as they either rely upon adjusting their rates each year or assume the differential granted will not permit of an excess, after providing for a catastrophe reserve, sufficient to warrant its division. Their practices follow:

Monopolistic

The Nevada fund has within its history paid two dividends, but none since 1920 If profits warrant, dividends are paid by the North Dakota fund In 1926, classifications showing a profit were divided into three groups and dividends of 10 per cent, 20 per cent, and 30 per cent paid thereon, but others, as coal mining and road construction, which had incurred deficits, received none The Ohio fund has paid two or three dividends, but none since 1923. Dividends have been paid by the Oregon fund during the past five years at the rate of 20 per cent for the first three, 28 per cent for the fourth and 14 per cent for the last No dividends are paid by the Washington, West Virginia and Wyoming funds.

Competitive

Provision is made in the law creating the Arizona fund for payment of dividends on profitable classes. The amount paid to any individual employer in such classes will vary, however, with the experience which his particular risk has developed. A very unique and elaborate method is employed by the California fund in the division of surplus Recognition is given to (1) the fact that the expenses of small policies are higher relatively than those for large ones, (2) to the individual loss ratio; and (3) to the fact that as a risk increases in size, its own experience more closely approaches a true measure of its hazards All three of these factors enter into the determination of the dividend paid to a given policyholder Dividends in recent years have averaged approximately 30 per cent. The report of the Wolfe examination, heretofore cited, discusses the operation of this dividend distribution system in detail and concludes that "while underwriters and actuaries may differ as to the method to be followed in distributing the surplus among the policyholders of a mutual or participating company, it is our opinion that the method followed by the Fund has worked substantial justice to the various policyholders entitled to refunds."

Dividends paid by the Colorado fund have averaged roughly

15 per cent for the past six years and those for the Michigan fund have been 10 per cent for the past fourteen years. The New York fund has paid 15 per cent dividends to its "general group" during the past six years and to "special groups" amounts ranging from 0 to 90 per cent. These "special groups," consisting of individual plants or trades, materially aided the fund in its early growth for they were practically the equivalent of individual mutuals within the fund, and thus brought in a number of large policyholders with good risks. They are subject to the same underwriting rules, classifications, rates (including 15 per cent differential) and expense ratio as the "general group," but their dividends depend entirely upon the surplus of the individual groups.

Until 1925, the Pennsylvania fund paid 15 per cent dividends on commercial and 10 per cent on coal risks, with an extra dividend on each in 1920; but in 1925, a uniform dividend of 12 per cent was paid on all risks, including those subject to a minimum premium, which previously had received no refund No dividends are now being paid by the Idaho, Maryland, Montana and Utah funds

Adequacy and Equity of Rates

Ability to meet current payments as they fall due is not the sole test of a fund's financial solvency or of its rate adequacy. This has already been pointed out in connection with the discussion of reserves.

Assuming that the reserves as shown by the balance sheets of the various funds are fully sufficient for their purposes and that the surpluses indicated by the same funds are not fictitious either in whole or in part, the rates of all compensation funds, other than Washington and West Virginia, would appear to have been adequate The equity of rates and of the systems of classification as well as of their application to individual risks can not be dismissed so readily. For sake of clarity, inequities will be considered from two angles, (1) those attributable to unscientific determination of classifications and relative rates, and (2) those attributable to improper application of classifications and failure to audit payrolls.

1. Inequities Due to Unscientific Determination of Classifications and Rates

Inasmuch as the rate making methods of monopolistic funds are on an entirely different plane than those of competitive funds, a discussion of any inequities resulting should clearly differentiate the two types of funds

Monopolistic—A system of classification which does not recognize fundamental differences in hazards among industries, trades or processes must necessarily penalize an employer with a small hazard who is classed with others whose risks are greater if he is perforce obligated to pay the rate for the class into which his risk is placed. Wyoming affords the most striking example of this injustice for all employers there are placed on the same basis But only those with a considerable payroll exposure can ever accumulate an amount in their individual accounts which will entitle them to the benefit of their own good experience Thus, of the 1,220 employers who paid premiums to that fund during 1926, only 28 had balances exceeding $3,000 in their accounts at the beginning of the year Of this number seven paid no further premiums during the year since their accounts were not reduced below $3,000 or 2 per cent of annual premiums. On the contrary, many accounts were overdrawn. The Kemmerer Coal Company account, for example, showed an overdraft on December 31, 1925 of $223,738 98 During 1926 this account was credited with $38,674 03 in premiums and charged with $11,545 06 paid out on orders of award, leaving an overdraft of $196,610 01 at the expiration of the year

The inequities resulting from lack of a classification system and the application of one rate to all industries alike may best be demonstrated by listing the ten industries for which the largest payments were made on awards during 1926 and comparing compensation costs (excluding expenses of administration) with premium receipts

These figures, covering 85 per cent of the fund's business in 1926, show so clearly both rate inadequacy and rate inequity that they need no elaboration

	Premium Receipts	Awards Paid
Coal Mining[a]	$168,602 48	$131,548 24
Oil Refining	83,091 03	105,131 35
Oil Drilling	50,011 85	45,260 68
Road and Street Construction	12,250 28	30,845 70
Teaming, Transfer and Trucking	10,758 05	23,880 40
Sugar Manufacturing	14,673 72	15,874 21
Building Work	11,566 65	13,456 96
Logging	8,266 69	10,999 25
Engineering	3,024 32	10,861 11
Structural Steel	1,903 92	9,118 07
	$364,148 99	$396,975 97
Total for All Industries	$434,443 34	$461,142 60

[a] Protected by reinsurance.

Although the plan adopted by the Washington fund of having each of its 37 groups self-supporting would seem to preclude the possibility of discrimination, nevertheless, the system of classification would still appear to admit of unequal treatment Statistics evidencing the income receipts and compensation costs of various classes are not available so no definite conclusions can be drawn. Classified data have not been published for the Ohio and Oregon funds either, but as respects the former, it is worthwhile to note the following reference which appeared in the 1926 Actuarial Audit previously cited.

"The classification system of Ohio is maintained so that as far as possible, consistent with actuarial science on the one hand, and satisfaction to employers on the other, statistics will be produced upon which rates can be, and therefore are, promulgated, dependable, so far as humanly possible, relative to adequacy and reasonableness"

While the Wyoming system is probably the most extreme and glaring example of unfairness among policyholders from the standpoint of classification, an analysis of various other funds with respect to the extent to which classifications are refined suggests that inequity also prevails among them though not to such a marked degree. To illustrate, the Oregon, Washington and West Virginia funds quote coal mining rates which are the same for all companies regardless of whether operations are performed above or under ground The North Dakota fund classifies the two operations differently but makes no distinction in the rate, whereas in Ohio the rate for surface

coal mining is $1 30 as contrasted with $3 50 for underground work. Thus, in the latter state, the dissimilarities in both the nature of the work and its hazard are recognized Railroad construction is all classified together in West Virginia irrespective of its character, in North Dakota the railroad construction class is defined as follows. "Railroad Construction and Maintenance of Right of Way, Steam (no blasting, tunneling or bridge building) including incidental culverts not more than 25 ft. span," and the excluded operations fall under other headings; whereas in Ohio a much more minute subdivision is used and different rates are quoted for each class The contention of some fund officials that their data do not warrant any greater refinements in classification may be admitted but this does not remove the criticism of inequity It only emphasizes the value of utilizing the combined experience of many states

An even more serious indictment may be brought against certain monopolistic funds for their discrimination in favor of influential industries Whether pressure is brought to bear upon fund officials to keep the rates for these industries low or whether their rates are kept low to secure political goodwill is a matter of little moment The grave charge that less influential employments are helping in some states to bear the cost of those more favored still remains and its foundation lies in the records These speak for themselves.

During thirteen years of operation ending June 30, 1926, the Nevada fund received in net premiums a total of $4,005,554 of which its mining class paid 50 7 per cent The earned premiums and compensation costs of this class for each of the past five years were:

Year ending	Earned Premiums	Compensation Costs
June 30, 1922	$130,776 40	$185,261 24
June 30, 1923	164,809 49	192,937 38
June 30, 1924	146,772 53	161,061 44
June 30, 1925	145,911 28	177,213 25
June 30, 1926	143,115 61	167,015 68

The foregoing figures do not include the share of administrative expenses which this class should properly bear, nor do

they embrace interest and miscellaneous earnings. Were both considered, each year would still show a deficit, which, of course, has been cumulating The last published report of this fund shows that for the thirteen year period ending June 30, 1926, the total net premiums of the mining class were $1,977,-775 98 whereas the total compensation and administration costs were $2,198,288 04, leaving a deficit of $220,512.06, which was reduced by interest and miscellaneous earnings to $51,-340.41 As contrasted with this favored group, it should be noted that the miscellaneous group which for the thirteen years paid in only 13 3 per cent of the total premiums has nevertheless contributed $142,311 to surplus [2]

Recognition by the Industrial Commission that the mining rate is inadequate may be found in both its 1924 and 1926 biennial reports. The former says "while the State Insurance Fund, as a whole, shows a healthy surplus, in addition to adequate reserves to provide for the payment of all known and estimated liabilities, the experience of the past two years indicates that an increase in rates in Classes 1 and 2 (Mining Industry) may be necessary, . ." The increase was not made so the 1926 report calls attention again to the fact that "the experience of the past two years in the mining industry has been very unfortunate, and has resulted in a rather large deficit accumulated in Class 1." In spite of this inadequacy and acknowledgment of it by fund officials, the rate has been unchanged since 1918. When the writer visited the fund in 1926, the chairman stated it might be necessary to increase the charge 25 or 50 cents, it being now $2 50 per $100 of payroll. In this connection it is interesting to note that Dr. I. M Rubinow who was called in at one time as consulting actuary calculated that the rate should be at least $4 50.

Another evidence of this fund's discriminatory favoring of mining risks is manifested in its failure to distinguish between mine construction, underground operations and surface operations This has not always been the case The processes of shaft-sinking, underground and surface mining carried rates

[2] Refer to the section of this chapter describing rate-making of monopolistic funds

of $3, $2 50 and $2.00 respectively during 1913, 1914 and 1915 Underground and surface mining were then combined and given a rate lower (except during 1917 and the first quarter of 1918 when it was the same) than the charge for construction. In 1918 all were combined and have carried the rate of $2 50 ever since

Coal mining is the leading industry insured by the West Virginia fund During the year ending May 31, 1926, 49 per cent of all employees covered by the fund were in this class and 73 per cent of the fund's premium income was received from it. This industry appears to have been especially favored ever since establishment of the fund on October 1, 1913, since the original law provided that the highest rate charged any class should not exceed 1 per cent of the payroll, a rate obviously too low to meet the benefit costs of such an hazardous occupation However, the New River Collieries Company disaster on April 28, 1914, which resulted in 180 deaths, created a huge deficit in the fund and obliged the legislature to remove the 1 per cent limitation Upon the same occasion, moreover, provision was made for the catastrophe reserve hereinbefore discussed There is no evidence to show that the original deficit created by the coal mining class was ever made good by it On the contrary, catastrophe reserves contributed to by all classes have been used almost exclusively to pay unusual losses of the coal mining group Thus, of the 25 catastrophes listed in the 1926 report as having occured between 1914 and 1926, only one (that of the Berkeley Glass Sand Company occurring June 7, 1926) took place in an industry other than coal mining. It is also significant that 667 of the 686 total fatalities in these catastrophes were caused by mine explosions, 13 by fire, lightning or gasoline explosion in or about a mine, and the remaining 6 by a dynamite explosion at the sand company mentioned

Part of the records of the fund were destroyed in 1921 by a fire in the State House so the writer has been unable to obtain statistics which would enable him to present a comparison of premium receipts and compensation costs for this class over a period of years The report covering the fiscal year ending

June 30, 1925, shows however, that coal mining risks paid in a total of $1,989,622 in premiums and the compensation costs for their employees aggregated $2,191,994. The rate for coal mining is but $1.75 (ridiculously low as compared with rates in other states) and the records show beyond any doubt that the unsound financial career of the West Virginia fund has been due to its insufficiency. On the basis of the facts available, there is every reason to believe that the West Virginia fund is operated to give coal mines a rate below cost at the expense of industries less influential politically.

Even when there is no conscious effort to favor one industry at the expense of another, rate makers may be disinclined to increase rates on extra-hazardous classes to the level indicated by experience until literally forced to it Coal mining ranks second among North Dakota's various industries as gauged by the amounts paid in premium income to the state fund It has been an unprofitable class for years but fund officials appear to have been reluctant to increase rates to the extent necessary. As evidence of this inertia is the following comment, abstracted from the fund's third annual report covering the year ending June 30, 1922, upon the $48,158 deficit shown by this class

> "Although the experience developed by classification 1001, underground coal mining, has resulted in a deficit, the rate under this classification was not increased This action was the result of the opinion expressed at the meeting of employers and of the Commissioners of the Bureau in which it was decided to allow the rate of $4 70 to stand unchanged for a period of one year, as it was felt that the experience as developed had, perhaps, been due to an unusual number of fatalities, and that future experience would justify the present rate."

In 1923 the rate was increased from $4 70 to $5.17, subsequently to $5 62, $6 00 and in 1927 to $6 25 but the lagging of rate increases behind consistently unprofitable experience is notable throughout.

Competitive.—The National Council classification represents the best thought of compensation insurance experts. It has received the endorsement of insurance commissioners, and is standard in all states save Pennsylvania and those with mo-

nopolistic funds. Its adoption by competitive funds is therefore entirely commendatory.

National Council rates, for reasons similar to those just enunciated, may also be regarded as being as nearly equitable as any that human ingenuity has yet been able to formulate Their use by competitive funds, even with a differential, can not be criticized on the grounds of inequity and certainly no charge that they favor the politically influential industries of any state is at all sustainable The only possibilities for discrimination by competitive funds arise therefore in the states (Maryland, Michigan and Montana) making all their own rates, (whether or not predicated upon those of the National Council) and the states (Arizona and Idaho) making rates only for certain leading industries. No data are available for the Maryland and Michigan funds which would warrant any judgment as to their relative fairness, and the Montana fund has had but a limited experience under its present system. The premiums and losses by classes of the latter for the fiscal year closing June 30, 1926 (the first year of operation under the new rates) show some rather wide divergences but it would appear that an effort is being made to adjust these and give each industry a square deal [3]

[3] "Effective July 1, 1925, the Board was obliged to revise the entire system of classification and rating in industry Prior to that time rating was done on a basis of divisions and classes outlined by the law as originally enacted Ten years experience demonstrated that the system was inequitable, haphazard and altogether unsatisfactory In many cases two classifications of industry varying widely in the degree of hazard to workmen were grouped in the same division and paying the same assessment rate.

"In order to get the whole system of rates and classifications on a more scientific basis and to lay the foundation for a plan that will ultimately result in an equitable adjustment of rates, the Board adopted the system of rates and classifications that is used by all the insurance companies, and published a new rate manual with code numbers and classifications rather than divisions and classes In order to get information upon which to base the rates under the new system, the Board was obliged to go to the Tables of Experience of the various insurance companies, which are nation-wide, rather than to attempt to work out rates from the Experience Tables built up under the system of divisions and classes

"The system made effective only a year ago is as yet too new to justify much change in the rates then published and now effective It was not possible to properly distribute all of the funds collected under a system of rating by divisions and classes so as to get the proper amount of fund to start each code and classification under the new system As a result of this, the table which shows the financial condition of the subfunds for each

Mining rates charged by the Arizona fund are predicated upon the normal accidents of that industry plus a loading of 15 per cent, of which 5 per cent is intended for expenses of operation and 10 per cent for excess or catastrophe losses. During 1926 no accident cost any mining company insured under this plan more than $14,000 as the Commission absorbed that part between $14,000 and $25,000, and the reinsurance carrier bore the excess. This fund has only been operative a short time so its experience is too limited to warrant any conclusions. Figures for classes rated separately by the Idaho fund have not been published.

2 *Inequities Due to Improper Classifying and Failure to Audit Payrolls*

A carefully defined classification system and an equitable schedule of rates are not sufficient in themselves to guarantee that every employer will pay his proper premium Further essential safeguards are the inspection of risks to determine whether they are correctly classified, and the examination of the insured's records to ascertain whether the entire payroll exposure has been reported. These functions are performed for most funds by payroll auditors but the extent to which they have been developed differs.

Monopolistic—Employers are required by monopolistic funds to describe their operations and submit a statement of payroll, sometimes under oath. Some checks are ordinarily made upon the accuracy of the information furnished. The practice of each fund is listed beneath

code and classification is more or less misleading as to the experience of hazard in each particular classification It will require several years yet to build up sufficient experience to effect an equitable adjustment of all the rates

"Pending the time that sufficient experience to show the hazard in each classification can be accumulated, the Board believes it desirable to be very cautious in the matter of adopting rate changes. There are a few classifications under which it is now patent that the rate is too high, such as those contained under codes 111, 113, 412, 505, 712, 808, 1006, 1711, 2110, 2304 and 2801 There are a few other classifications, such as 301, 912, 1210, 1405, 1408, 1705, 1908, 2803, and 2805, where it is patent that the rate is too low Some moderate adjustment in the way of either decreasing or increasing the rates for some or all of these classifications may be desirable now."—Eleventh Annual Report, Montana Industrial Accident Board, 1926.

Nevada.—Photostatic copies of payrolls are supplied by some mining companies which are audited in the office. A travelling representative audits others.

North Dakota.—One field man audits roughly 50 per cent of payrolls each year

Ohio —A field staff of approximately 100 men investigates claims and audits payrolls. Very few rate inspections are made.

Oregon.—Seventeen auditors cover about 95 per cent of payrolls annually

Washington —Twenty auditors annually cover about 75 per cent of payrolls.

West Virginia —There are no auditors. Employers submit sworn statements of payrolls.

Wyoming —Banking department audits payrolls if fund desires This is very seldom done.

Almost every gradation in the extent of supervision over classifications and payrolls may be found among the monopolistic state funds but to what degree employers are taking advantage of any neglect on the part of their respective funds is a matter difficult of determination The shortcomings of the Ohio fund in this connection, due to an expense limitation handicap, are stressed in a recent audit[4] and it seems reason-

[4] "It is to be desired, however, that the work of assigning risks to classifications and watching for change of classification due to changes in nature of risk be improved

"The present application blank, if properly made out by the employer, should enable the underwriting department of the Fund to assign the risk to its proper classification so far as the *reported* data are concerned; but it is eminently to be preferred that a representative of the Fund ascertain, by first-hand inspection, the complete nature of the risk the Fund is assuming. In the general activities of life, it is not good practice to buy without seeing It is better for the sake of uniformity, if for no other reason, to have the Fund classify all risks than to have them classified for the Fund by a heterogeneous number of employers, with varying and divergent conceptions of what they are asked to do

"Then too, when a risk has once been classified, it retains its classification year after year, unless some circumstance comes to the attention of the Fund indicating that the nature of the risk has changed, as, for instance, the report of an accident may indicate a change in classification, or a payroll report furnished by the employer or a payroll audit made by an auditor of the Fund may bring to light a change in classification.

"The operators of the Fund recognize the above described situation, and have endeavored to ameliorate it, but are hampered in their progress

able to believe other monopolistic funds are open to a similar criticism.

Competitive.—When risks in competitive fund states are inspected and rated by representatives of the rating bureau having jurisdiction in that territory, they are naturally checked for classification In the three states where the funds make their own rates, this must be done by their field men. But even when the fund is a member of a rating bureau, it must audit the payrolls of its policyholders and verify their distribution. The practice of each in this regard is set forth below.

Arizona —One field man audits payrolls.

California —Twenty-two auditors cover about 80 per cent of payrolls.

Colorado —One field man spends all of his time and another, part of his time, auditing payrolls, together covering from 60 to 75 per cent in course of a year

Idaho —Two field men audit payrolls, solicit business, inspect risks and investigate claims

Maryland —One auditor covers accounts the fund wants checked Others are not audited because of the necessity for limiting expenses

Michigan.—Sworn statements of payrolls are furnished, but some are checked by one auditor whose principal duty is to assist certain employers with their classification

Montana —There is no regular payroll auditor, although an accountant may make special trips for that purpose or outside help be secured

New York —Twenty payroll auditors cover approximately 88 per cent of the total payroll each year. They also check classifications. Where there is a difference of opinion with the Rating Board, further investigation is made.

by lack of expense appropriation for a suitable personnel to handle it as fully as should be done."

"Although payrolls furnished by employers are made under oath and with a penalty for false returns, it would nevertheless be well to have all risks completely audited as soon as practically possible after the termination of the respective periods of coverage. We are without data showing whether such additional work would be worth its expense."—Abstracts from Ohio Actuarial Audit (1926).

Pennsylvania.—Four payroll auditors reach about 15 per cent of policyholders They also make certain investigations of risks for the purpose of accurately determining the correctness of the classifications used in underwriting them.

Utah.—Employers submit sworn statements of payrolls so the fund manager believes it does not pay to audit except when there is suspicion as to classification. One part time man does, however, audit payrolls representing about 25 per cent of the premium income

While a better situation undoubtedly exists among competitive funds as regards classification, there is considerable variance in the degree to which accuracy of payroll reporting is checked. Some funds are cognizant of this handicap as is indicated by the fact that the Pennsylvania fund is contemplating an increase to its staff of auditors while the Montana fund is endeavoring to secure a legislative appropriation for a similar purpose. In the latter state, at least, the management considers the lack of a payroll auditor results in under payments by some employers.[5] The Idaho fund in a recent report summarizing its needs for the future, stresses the importance of having "more men in the field as payroll auditors, claims adjusters and collectors."

Underwriting Selection

Monopolistic funds must, of course, write all risks covered by their state laws, unless self-insured, and competitive funds in Idaho, Maryland, Montana, New York and Pennsylvania must take any business offered, though the New York fund may rate up that which is undesirable. The Colorado and

[5] "The Board has long realized the necessity for the employment of a Traveling Auditor In literally hundreds of cases the Board has been obliged to rely upon the payrolls which are reported by the employers, without any way of checking these payrolls, to determine whether the proper amount of wages to workmen was reported, and whether the workmen were properly classified. A Traveling Auditor should be in continuous employment, checking the work and books of such employers In 1924 the Board did employ a Traveling Auditor for four months at a cost to the Department of about $1200 He obtained approximately $10,000 in excess premiums The Legislature then in session refused to appropriate sufficient money to continue his services, despite the showing that had been made" Excerpt from Eleventh Annual Report of the Montana Industrial Accident Board—1926

Michigan funds have in the past exercised judgment in the selection of risks, but officials of the former are uncertain whether it can be forced to accept one which no private company wants An examination of competitive fund loss ratios in conjunction with those of private carriers doing business in the same state does not reveal any discrepancies which would warrant a conclusion that these restrictions upon underwriting selection have materially affected losses. Their influence has been offset in practice by merit rating and dividend payment plans.

CHAPTER IX

WORKMEN'S COMPENSATION FUNDS

COST AND ITS DISTRIBUTION. CONTINUED

Attempts are frequently made to compare rates of monopolistic funds with those of private companies in nearby states to show the lower costs due to state operation Such comparisons are misleading not only because classifications are arbitrarily selected which ordinarily show the most extreme rate contrasts but primarily because no account is taken of the difference between law levels or of liberality in awarding compensation The July, 1925, communication of the Industrial Commission of Ohio to the subscribers of the Ohio fund contained such a comparison. Ohio manual rates were compared with those in New York, Indiana, Illinois, Kentucky and Michigan and the statement was made that "benefits to the injured workers in the state of New York are about the same as in Ohio."

Obviously, neither the Ohio fund nor any other monopolistic fund makes any public claim to lower rates through the short-changing of injured workmen Their contention, on the contrary, is that costs are low because of economical operation arising from state monopoly However, if to the Ohio rate, which is now pure premium plus a 1 per cent loading for safety work, should be added the full stock company expense loading, no such marked divergences would appear as are found in the following illustrations taken from the Ohio comparison above mentioned.

Blast Furnaces—$8 43 in New York; $1 60 in Ohio
Iron and Steel Erection—$28 41 in New York; $6 00 in Ohio.
Sawmills—$13 20 in New York, $5 50 in Ohio.

If these differences are typical of the whole rate schedule and Ohio officials are correct in assuming the law levels are the

same, then the fund has certainly placed itself in a position which is open to attack from injured workmen. In other words, if the entire stock company expense loading be added to the Ohio rates cited, the inescapable conclusion is that the differences which still remain result from illiberality in the treatment of claimants. In case the differences are not typical, and a further examination reveals this is the case, then the comparison means nothing.

A recent study made by the National Council on Compensation Insurance sheds additional light on the comparison of Ohio and New York rates In referring to it recently, the permanent representative of the National Convention of Insurance Commissioners to the National Council on Compensation Insurance stated:[1]

"The test was made by applying the 1926 rates for Ohio to New York payrolls for the same classifications for policy year 1923, amounting in the aggregate to $2,052,202,000. Assuming the Ohio rates correct indices of Ohio loss experience, the application of the rates should give the loss costs in Ohio on these payrolls. The indicated loss cost thus produced was $9,178,823 Adding the 1½ per cent occupational disease charge gave $9,486,656. Now in New York the actual loss costs on these payrolls, raised to the level of the present New York law, were $13,693,012. This is 44 3 per cent more than would have been paid in Ohio on the basis of the Ohio pure premiums; or if the 1 per cent safety engineering loading in the Ohio rates be deducted, near 45 7 per cent more. The New York law is of course more expensive than the Ohio law. If 1,000 be used to represent the value of the New York law, the Ohio law figure is 839, not enough by any means to account for the prodigious gap in experience. This does not of course lead certainly to the conclusion that the Ohio board is unduly conservative It may be just as fair to conclude that the New York board is unduly liberal."

When a monopolistic fund discriminates in favor of a particular industry with regard to rates, a comparison of the "favored-class rate" with that for a similar industry in another state is even more unfair. To illustrate, the rate charged for mining by the Nevada fund is sometimes contrasted with that of California but as was previously demonstrated, the

[1] Excerpt from address of Hon Clarence W. Hobbs, delivered before the Tenth Annual Conference of the Association of Superintendents of Insurance of the Provinces of Canada, August, 1927.

Nevada rate is much too low. Rates for other industries are not used in comparison, however, for the very obvious reason that they were originally obtained from the California manual.

Apparently, the proponents of monopolistic funds who advance such rate comparisons believe the secret of low compensation costs lies not in a state fund itself but in the monopolistic form of such since the rate comparisons in question resolve themselves into contrasts of monopolistic and competitive fund rate scales when competitive funds use the same rates as those charged by private carriers Allowance for differentials and dividends could not produce the dissimilarities cited

While the influence of too many variables renders rate comparisons of the sort described meaningless, it is of course possible to compare the net rates of competitive funds (after deducting differentials and dividends) with those of private carriers, when both use the same manual, in order to show the difference in premium cost to the policyholder. This has been done below for such funds and the results expressed as percentages of stock company rates

TABLE XVIII

RATIOS OF COMPETITIVE FUND NET RATES TO BOARD RATES—1926

State	Differential	Dividend	Percentage of Board Rate
California .	None	30%[a]	70%
Colorado	15%	15	72 25
Idaho .	25[b]	None	75
New York	15	15[c]	72 25
Pennsylvania	10[d]	12	79 2
Utah	20	None	80

a Average dividend for all policyholders
b Differential for classes to which National Council rates are applied
c Dividend to general group
d Differential discontinued December 31, 1927.

The general rate levels of the three funds which formulate their own rates—Maryland, Michigan and Montana—are estimated by their officials to be 30 per cent, 15 per cent and 10 to 20 per cent lower than board rates. If we accept these estimates and then allow for a 10 per cent dividend in Michigan,

we find competitive fund costs are respectively 70 per cent, 76.5 per cent and 80 to 90 per cent of the rates for stock companies in the same states.

Even though a competitive state fund may be writing compensation insurance at less than board rates, it is not necessarily the lowest cost compensation carrier legally operating under the insurance laws of its state. Mutuals, reciprocals and participating stock companies may be providing protection still more cheaply. For example, the principal competitor of the Pennsylvania fund is a participating stock company which pays dividends to policyholders of 25 per cent, thus yielding a net cost lower than that of the fund.

It is sometimes argued that the existence of state funds has tended to keep the compensation rate level low, even to the point of making it unprofitable for private companies to write the business The validity of such an assertion is decidedly questionable and needs more evidence in its support than has thus far been produced. Certainly, the withdrawal in recent years of some companies from the underwriting of compensation risks and the appeals to state insurance departments for permission to increase rates to meet rising compensation costs would seem to justify a contrary inference. There would be more reason for contending that the competition of state funds with mutual companies has tended to increase the latter's dividends and thus reduce the net cost to their policyholders, but even this is disputable

Expense Ratios

Before concluding the discussion of comparative rates, the underlying basis for the savings, which state funds maintain that they effect, should be examined To this end, the assumption will be made that the so-called savings result from economy of operation (as the funds contend) and not from parsimony in claim payment. It is of course unthinkable to consider the latter a legitimate savings although there is reason to believe claim shaving is responsible, at least in part, for the low premium rates of some monopolistic funds. As the ex-

pense ratios of monopolistic and competitive funds differ quite as widely as some of their practices, they are analyzed separately.

Monopolistic

The administration expenses of the various monopolistic funds during 1926 are expressed below as percentages of the premium receipts for the same year.

TABLE XIX

RATIOS OF EXPENSES TO PREMIUMS

Monopolistic Funds

1926

	Per Cent
Nevada	8 8
North Dakota	11 7
Ohio	5 0*a*
Oregon	10 4*b*
Washington	7 6*c*
West Virginia	3 8
Wyoming	4 1
Weighted Average	5 9

a Includes 1 per cent for safety work
b Excludes rehabilitation expenses.
c Includes all expenses of Department of Labor and Industries

Although the expense ratios range between 3 8 per cent and 11 7 per cent, the average is only 5.9 per cent due to the weight of the two largest funds—Ohio and West Virginia No segregation of expenditures was available to show the amounts disbursed for administration of the compensation law as distinguished from administration of the fund or to point out the proportionate costs of different types of service. However, previous discussion of these funds would indicate that the great bulk of their expenses was incurred in connection with the operation of the fund as an insurer rather than as a judge, and moreover, that little was dispensed for such collateral services as claim adjustments, payroll audits, safety inspections and the like.

These expense ratios include no tax payments whatever as all monopolistic funds are entirely exempt from taxation by

any governmental body. Moreover, rent for quarters occupied by the Oregon, Washington and Wyoming funds, salary for the Compensation Commissioner of West Virginia, proportionate costs of supporting the courts which handle claim settlements in Wyoming and similar items of expense are not charged. Their inclusion, assuming a 2.5 per cent premium tax, would doubtless raise the average expense ratio to at least 10 per cent

Incidence of Expenses—While operating expenses have been related to premiums for comparative purposes, they do not always enter into the premium charged policyholders. Many of the funds have been subsidized by the state in whole or in part as regards administrative costs Until 1923, the Nevada fund received its printing and quarters free of charge but has been entirely self-supporting since that time. All expenses of the Ohio fund except those for the newly created Safety Division are borne by the state The Oregon fund pays no rent for its quarters in the State Capitol or any charges for the services of an assistant attorney general, and, in addition, received until 1924 annual state appropriations, except for the year 1921. State aid has been suspended since 1924 but the total subsidy to the fund from its inception has already exceeded a million dollars The Washington Department of Labor and Industries receives from the state an appropriation to cover all expenses of administering the accident fund, half of those for the Safety Division but none for the medical aid department All expenses of the West Virginia fund were assumed by the state during the first two years of operation. The state now carries the salary of the Compensation Commissioner as well as the expense of providing office space. In Wyoming, the public likewise supplies the fund with free office room and supports the courts which handle claims The North Dakota fund is completely self-supporting and has returned the $50,000 originally appropriated for its use.

Limitation Upon Expenses.—As has been heretofore noted at various points, some monopolistic funds recognize they are not furnishing the best possible service but are powerless to do

otherwise owing to limitations on expenditures. These are listed below.

Nevada	...
North Dakota	Budgetary appropriation.
Ohio	Budgetary appropriation plus 1 per cent of premiums for safety activities The last appropriation was only 25 per cent larger than the first
Oregon	Ten per cent of premiums.
Washington	Budgetary appropriation
West Virginia	Budgetary appropriation.
Wyoming	No limitation except they must be paid from interest on funds

The principal disadvantages of budgetary restrictions are (1) the difficulty of impressing legislators with the importance of spending an adequate amount for such services as claim handling, accident prevention, audits, inspections, etc. or of paying salaries to employees commensurate with their responsibilities; and (2) the inflexibility of a fixed budget when the purchasing power of the dollar is changing or the fund is growing in size.

Competitive

Ratios of administrative expenses to earned premiums for competitive funds in 1926 are presented in Table XX In order to make these readily comparable with private company expense ratios, the earned premiums of the various funds allowing a differential have been corrected for this factor whereas those for funds making their own rates have been adjusted on the basis of the estimates made by their officials as to the relation between rate levels. If officials have erred in these estimates on the side of their funds, the resultant ratios will be understated but at least the comparison treats them fairly and because the three funds under consideration are relatively small in size, the average for all can be affected little

The California fund pays a premium tax of 2 6 per cent and the Utah fund pays 1.5 per cent. These are included in the respective expense ratios together with the pro rata shares of Industrial Commission expenses borne by the Maryland and New York funds in common with other carriers. If a 2 5

per cent tax on earned premiums be assumed for the funds other than those of California and Utah, the average ratio to actual earned premiums would be 17 2 per cent and to adjusted earned premiums 15 4 per cent for all combined. But even these corrected ratios are not yet directly comparable to those of private companies for they do not include any charges for rent of quarters used by the Colorado, Idaho, Montana and Utah funds, for advice or assistance supplied by the legal branches of the various state governments or for services connected with investments rendered by state officials not on the payrolls of the funds It is hard to evaluate these indirect subsidies but certainly an estimated average expense ratio of 17 per cent of earned premiums adjusted to stock company levels would scarcely be far out of the way.

TABLE XX

RATIOS OF EXPENSES TO PREMIUMS

Competitive Funds

1926

State	Ratio to Actual Earned Premiums	Ratio to Earned Premiums Adjusted to Stock Company Level
	Per cent	Per cent
California	14 7	14 7
Colorado	4 4	3 8
Idaho	11 2	8 4
Maryland	9 8	6 8
Michigan	14 2	12 1
Montana	11 1	9 5
New York	17.5	14 9
Pennsylvania	17 5	14 7
Utah	11 8	9 4
Weighted Average	15 6	14 0

Note The Montana expense ratios exclude the cost of the Bureau of Safety which inspects boilers, steam machinery, hazardous plants, quartz mines, coal mines, etc as it is supported by fees. For computing the Montana ratio in the right hand column, the rate level has been estimated at 15 per cent under that of private carriers

Incidence of Expenses.—All expenses of the Montana fund are borne by the state as were those of the Colorado fund from

1915 to 1921 and of the Maryland and New York funds for the first two years of their existence. Original advances of $100,000 to the California, $20,000 to the Idaho, $500,000 to the Pennsylvania and $40,000 to the Utah funds have all been repaid Outside of Montana, the principal subsidies to competitive funds at present are those mentioned in the preceding paragraph, namely, free office space, legal and investment aid. All other expenses are paid by policyholders.

Limitation upon Expenses—Many competitive funds are restricted with respect to their aggregate expenses although a much more intelligent legislative treatment of the larger funds is evident. The situation of each is set forth below.

California—No limitation
Colorado—Ten per cent of premium income.
Idaho—Budgetary appropriation
Maryland—Budgetary appropriation—The Fund and Industrial Commission are budgeted together and the Commission decides how much of the appropriation the Fund may use
Michigan—No limitation
Montana—Budgetary appropriation.
New York—Budgetary appropriation but not over 25 per cent of premiums
Pennsylvania—No limitation
Utah—No limitation

Frequent references have been made in the preceding chapters to the hampering effect exerted by expense limitations upon essential and constructive activities. The disadvantages of budgetary limitations have also been cited However, the following analysis, as to the effect of such a restriction upon the Colorado fund, made by Albert H Mowbray in the recommendations with which he concludes his report of the 1925 audit, is so timely and so applicable to many competitive and monopolistic funds as well that it is given in full. It is significant that the 1927 session of the Colorado Legislature acted upon this suggestion and gave the Industrial Commission jurisdiction over the fund's expenditures, without specific legislative appropriation, but subject to the stipulation that they shall not exceed 10 per cent of the premium income.

"Chapter 251 of the Laws of 1921 now provides that the expenses of the Fund must be paid from its interest earnings, but only as spe-

cifically appropriated by the legislature This puts a competitive quasi business enterprise on an inflexible ironclad budget, to which handicap its competitors are not subject. This is unnecessary and unwise. The money is not, like other moneys appropriated by the legislature, raised by taxation, but is that of the Fund's policyholders and, subject to reasonable limitation, should be expended for their benefit, as dictated by sound business judgment. The limitation that expenses may only be paid from interest earnings will serve as a satisfactory check on their ever becoming an undue burden on the policyholders. It stands to reason that in the pressure of its other work the legislature can not give adequate consideration to the business needs of the Fund. I have already discussed the desirability of expert medical advice in connection with claim administration. A competent legal advisor would be equally desirable.

"Above all, for the benefit of its experience and, more important, for the saving of life and limb of the workers of the state, the Fund should have its present efforts made more effective by a well organized and skillfully conducted Safety Department, which its appropriations do not now permit.

"For these reasons I strongly urge that the Commission be empowered to provide for the Fund's needs out of its interest income without the requirement of legislative appropriation In this connection it should be borne in mind that in essence the Fund is a mutual enterprise though conducted by the State and in a competitive field. If it can not adapt its operating expenses to its growing business and the needs and desires of its policyholders, it can not meet its full measure of success. The policyholders will be serving their own interests in supporting such legislation, and were they to go so far as to demand it, they could not be charged with asking more than their just rights."

Analysis of Expenses—It is regrettable that all competitive funds do not analyze their expenses in the manner called for by schedule W. However, figures for the California and New York funds which receive two-thirds of all the premiums written by competitive funds are available in this form, and are set forth in Table XXI in comparison with average expenses similarly analyzed for all participating and non-participating compensation carriers doing business in the state of New York. The data are for 1926. New York fund rates have been adjusted for the 15 per cent differential.

TABLE XXI

EXPENSE RATIO ANALYSIS

1926

	Percentage of Earned Premium Used For					
	Total Expense Ratio	Investigation and adjustment	Acquisition and field supervision	General administration	Inspection and bureau	Taxes
Non-Participating Carriers Doing Business in New York . .	40.5	9.1	17.4	8.9	2.6	2.5
Participating Carriers Doing Business in New York .	21.6	7.1	4.0	6.0	2.3	1.3
New York State Insurance Fund .	14.9	4.5	1.6	6.3	2.5	0
California State Insurance Fund	14.7	5.2	1.5	3.9	1.5	2.6

The above table shows that these two competitive funds have expense ratios lower than the average for either participating or non-participating carriers. However, it must be remembered that many mutuals embraced in these figures had individual ratios considerably under the average and some of these were lower than either fund mentioned even if no allowance is made for the New York fund's freedom from taxation. It is justifiable therefore to state that a well managed competitive fund is in the same class, from the point of expenses, with well operated mutuals

IN GENERAL

Expense ratios are both a measure of cost and a measure of service Monopolistic state fund proponents stress the former relation but ordinarily disregard the latter They deplore legislation which limits expenses but in the same breath point with pride to the difference between their expense ratios and those of competitive funds and private companies. In these comparisons they appear to see only the immediate saving in cost and overlook the fact (1) that by requiring frequent, elaborate and sworn reports of payrolls as well as full paper proofs of claims, they are passing on to employers and employees the

expense of services rendered by agents, inspectors, auditors and adjusters of private carriers, and (2) that services which would have been made possible by a larger expense are just as vital and in many cases much more constructive than the ones they are rendering If the point is pressed, they contend that lower operating costs are primarily due to the elimination of wasteful competition and costs of acquisition But this would not account for the extent to which their expense ratios differ from those of competitive funds The California and New York funds are the only ones having salaried solicitors as the others rely upon canvassing by mail and incidental contacts of claims adjusters, auditors and inspectors to bring in business. But reference to Table XXI indicates the costs of acquisition and field supervision are less than 2 per cent for each. The remaining differences must be attributed to the greater services performed by competitive funds, stimulated by private company rivalry. Were there no low arbitrary expense limitations or other deadening influences of public operation, it is conceivable that competitive funds would render even more complete services, but only through an increase of costs which would destroy the principal argument advanced for their creation.

The contention that acquisition costs which average 17.4 per cent for non-participating and 4 0 per cent for participating carriers in New York are pure waste inherent to a competitive regime can not be accepted any more than the assertion that the expenses of running a department store are a waste. There may be elements of waste, it is true, in both, but a policyholder is receiving a return in the form of personal contacts with company agents or representatives, advice as to his insurance needs, convenience in placing his coverage or adapting it to changed conditions, and the assurance that keen competition between soliciting representatives of different companies will assure him of first-class treatment. This is just as valuable in its way as the ability to select merchandise in person from a large and varied department store stock rather than to buy from a mail-order house on the basis of a catalogue description. Intangible

service of this order is the reason private companies carry the bulk of all compensation business in competitive fund states, and large department stores maintain their existence in spite of mail-order houses.

As previously stated, the private company expense loading formula makes allowance for expenses of acquisition, adjusting claims, auditing payrolls, inspecting premises, conducting the home office, and paying taxes. There is no specific provision for profit, as such During recent years, private stock companies, as a whole, have sustained underwriting losses. All the items, except taxes, represent expenditures for some form of service to policyholders. A study of comparative rates and expense ratios for state funds and private companies can ultimately lead, therefore, to no other conclusion than that the savings to which funds so zealously direct attention arise because the funds have curtailed many of the services offered by private carriers, and not because there is any special virtue in state operation.

CHAPTER X

PENSION FUNDS[1]

Coincident with the economic and social progress of this country in recent decades has come about a growing interest in old age provision. Not only is the individual becoming more concerned with respect to his financial future after the earning years of life have elapsed, but his employer is manifesting an increasingly greater interest in the same problem This is reflected on the one hand in the pension plans developed by private employers in commerce and industry, and on the other, in the systems of various kinds adopted by the federal government, the states and political subdivisions.

Public pension plans were at one time confined primarily to the granting of gratuities to war veterans and their widows,[2] but many public school, normal school and university teachers, municipal police and firemen, and federal and state employees now fall within the scope of some one or another of the laws in

[1] Although the author visited many of the funds discussed in this chapter, he is primarily indebted for the facts presented to the annual reports, laws and miscellaneous printed material supplied to him by administrative officials. Grateful acknowledgment is made of the cooperation thus extended.

In the preparation of this chapter, the writer has found of special service a book entitled "Teachers Pension Systems in the United States" by Dr Paul Studensky, published by the Institute for Government Research (1920) as one of a series of studies in the field of public administration; Reports of the Massachusetts Old Age Pension Commission (1925); Report of the Pennsylvania Commission on Old Age Pensions (1927); pamphlet entitled "The Problem of Old Age Pensions in Industry" published by the Pennsylvania Old Age Pension Commission (1926); Research Bulletins of the National Education Association, Vol. II, No. 3, May 1924, and Vol. IV, No 3, May 1926, entitled "Teachers' Retirement Allowances" and "Efficient Teaching and Retirement Legislation"; annual reports of the National Council of Teachers' Retirement Systems; and Bulletin No 17 of the Carnegie Foundation for the Advancement of Teaching dealing with "Retiring Allowances for Officers and Teachers in Virginia Public Schools" (1926)

[2] More than seven billion dollars have been paid by the United States Government to pensioners of the various wars in which this country has been engaged. Twelve states—Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Missouri, Mississippi, North Carolina, South Carolina, Texas and Virginia—have also paid substantial sums to confederate veterans and their widows.

operation. Even the public generally is made the beneficiary of the old age pension laws enacted in late years by some states [8] as a substitute for their former systems of poor relief

Treatment of all public pension plans is not germane to the purpose of this study, because, first, many are non-contributory and neither expressly nor impliedly infer a contractual obligation between a pensioner and the grantor of his pension, and secondly, for reasons initially advanced, our purview is limited to funds administered by state governments per se. Accordingly, no further consideration will be given to the pension systems of the federal government and various municipalities, nor to the straight pension plans of some states. Old age pension legislation has likewise been excluded, the administration and financing of the funds created by such having been entrusted to county authorities in all four of the states now having these measures on their statute books Further attention will be directed to the pension laws, and the funds established under their authority, for the benefit of teachers and state employees. It is not amiss to note, however, that the principles developed in the course of this survey are applicable to other contributory pension systems.

TEACHERS' RETIREMENT FUNDS

Arizona and Rhode Island have in force laws which grant pensions on retirement to teachers in public schools who have met certain requirements as to age and length of service.

[8] "Not only have bills in the last five years been introduced in approximately forty of the state legislatures, but many states have created commissions to study and report upon the subject of old age dependency and pensions Since 1914, the Legislatures of eight states—Arizona, Montana, Nevada, Pennsylvania, Wisconsin, California, Washington, Kentucky—and the Territory of Alaska have actually passed Old Age Pension Bills of one kind or another In about a dozen other states these bills have passed at least one house of the legislature At the present time only the states of Montana, Nevada, Wisconsin, Kentucky and the Territory of Alaska have old age pension laws on their statute books The California and Washington bills were vetoed by their respective governors, while in Arizona and Pennsylvania the laws were declared unconstitutional, not on the merits of the laws themselves, but in the former state because of the ambiguity and loose wording of the bill and in the latter because of certain constitutional limitations"—Report of the Pennsylvania Commission on Old Age Pensions (Jan 1927), p 102.

Maine has a similar act for the benefit of normal school instructors. These are non-contributory. Fourteen [4] states make no provision whatever in regard to the retirement of teachers, twelve [5] permit certain cities, counties or independent school districts within their borders to operate local systems, and twenty,[6] in addition to the District of Columbia, have created funds with state-wide application. Large cities in a number of the latter states have their own funds, but many previously existing local funds have merged with those of their respective states and do not come under the state plan. All told, some 56 cities, counties or independent school districts in thirty states were operating teachers' pension plans in 1926, but the combined membership of the twenty state funds (approximately 350,000) was very much larger than for all these local organizations. A discussion of the latter, therefore, has special significance in relation to the whole problem of aiding the teacher to face the financial uncertainties of old age.

Types of Funds

Reference to the soundness of the principles under which the various funds are operated permits of their classification

[4] Arkansas, Delaware, Florida, Georgia, Idaho, Mississippi, New Hampshire, New Mexico, North Carolina, Oklahoma, South Carolina, South Dakota, Texas and Wyoming.

[5] Alabama, Colorado, Iowa, Kansas, Kentucky, Louisiana, Missouri, Nebraska, Oregon, Tennessee, Utah and West Virginia

[6] The states having teachers' pension funds together with the dates when the activities of such were initiated are listed below When two dates are given, the first indicates a cash disbursements fund was created in that year whereas the second shows when the law was revised in order to place the fund on an actuarial basis California (1913); Connecticut (1917); Illinois (1915); Indiana (1915) (1921), Maine (1924); Maryland (1920) (1927); Massachusetts (1914); Michigan (1917), Minnesota (1915); Montana (1915); Nevada (1915) contributory cash disbursements fund (1919) non-contributory straight pension (1927) contributory cash disbursements fund; New Jersey (1896) (1919); New York (1911) (1921); North Dakota (1913), Ohio (1919); Pennsylvania (1919); Vermont (1919), Virginia (1908); Washington (1923); and Wisconsin (1911) (1921)

Illinois created a State Institution's Teachers' Pension and Retirement Fund in 1917. As it is a cash disbursements fund of small size and parallels the public school teachers' fund in its operations, it is not separately discussed.

A code bill passed by Michigan's 1927 Legislature inadvertently repealed the teachers' pension law The Supreme Court of the state has been asked to pass upon the constitutionality of the repeal.

into two distinct groups—(1) cash disbursements, and (2) actuarial Assessments are collected and benefits paid by funds in the first class irrespective of the actuarial cost or the future solvency of the plan Nine states—California, Illinois, Michigan, Minnesota, Montana, Nevada, North Dakota, Virginia and Washington—have such systems Actuarial principles underlie the accumulation and disbursement of teachers' contributions in the second class, although, as will be observed subsequently, the state's share of the cost is not always handled in such a business-like manner. Inasmuch as the teachers are adequately protected so far as their own payments are concerned, this classification is adopted with the proviso that it will be further qualified later as regards the state's method of financing its share of the burden. The roll of so-called actuarial funds comprises those of eleven states, namely, Connecticut, Indiana, Maine, Maryland, Massachusetts, New Jersey, New York, Ohio, Pennsylvania, Vermont and Wisconsin. Five of these—Indiana, Maryland, New Jersey, New York and Wisconsin—were originally on a cash disbursements basis but later recognized the dangers incident thereto.

Persons Covered

The benefits of pension legislation may be restricted to persons serving wholly as teachers, or partly as teachers and partly as superintendents, supervising executives and administrators. This is the situation in Montana and Nevada. Most laws, however, embrace not only teachers, but principals, supervisors, directors, superintendents and in many cases even employees of the state department of public instruction. The Pennsylvania law is exceptionally broad in its terms. Unlike the other nineteen, it is known as a "School Employees' Retirement Law," and defines employee to mean "any teacher, principal, supervisor, supervising principal, county superintendent, district superintendent, assistant superintendent, any member of the staff of the State normal schools, or of the staff of the State Board of Education, or any clerk, stenographer, janitor, attendance officer, or other person engaged in any work concern-

ing or relating to the public schools of this Commonwealth." Part-time employees are excluded.

Although the laws are designed primarily for teachers in public schools, those in normal schools, state universities and other educational institutions maintained at the expense of the state are frequently included

In eighteen states, membership in the fund is compulsory for all school employees, as heretofore defined, who begin to teach subsequent to the passing of the act Those in service at the time are given the option of joining the fund within a stipulated period. The Maine and Vermont acts are optional for all

Benefits Promised

The physically or mentally incapacitated teacher is as much, if not more, in need of assistance as the one who is superannuated. Consequently, allowances for disability, as well as for age or length of service, retirement are found in all acts. In order that a contributory system may appeal to and have the support of members, it is generally deemed advisable to grant refunds of teachers' contributions in case of death, resignation or dismissal. All actuarial funds make such provision but the practices of cash disbursements funds differ in this respect.

Some systems are much more liberal in their benefits than others. It is not within the scope of this treatise to evaluate any particular plan and determine whether its social purpose is fulfilled. Our attention must remain focussed upon the success or lack of success which has been achieved by state operation of contributory pension funds. An enumeration of the benefits and qualifications for their enjoyment must logically precede, however, an analysis of the methods employed for meeting costs, since, taken together, these two factors are the principal determinants of financial stability.

Superannuation Retirement

Cash Disbursements Funds.—Requirements as to age, service and minimum total contributions which govern the eligi-

bility of a member to a retirement allowance are shown in Table XXII.

TABLE XXII

QUALIFICATIONS FOR SUPERANNUATION RETIREMENT

Cash Disbursements Funds

State	Minimum Age	Years of Service		Minimum Total Contributions
		Total	In State	
California.	No provision	30	15	$360
Illinois	50	25	15	$400
Michigan	No provision	30[a]	15	Full amount of annuity for one year.
Minnesota	No provision	20	15	$425[b]
Montana	No provision	25	15	$300
Nevada	No provision	30	15	$360
North Dakota	No provision	25	18	Full amount of annuity for one year.
Virginia.	58—Men 50—Women	30	30	30% of average annual salary for past five years less total contributions.
Washington	No provision	30	15	$720

a For service of less than 30 years but more than 25, amount is scaled proportionately.

b Assuming teacher's annual salary never exceeds $1500 Otherwise, a different system of assessment is followed

Particular note should be taken of the fact that most of these funds have no provision as to retirement age, thus permitting the pensioning of a teacher who has met the condition as to length of service but who may not be much more than 45 or 50 years of age. Obviously, this will have a material bearing upon the cost of such a system If a member has complied with other conditions but his total assessments have not equalled the amount stipulated in the last column of the table, the difference must be deducted from any pension benefits paid him.

Table XXIII presents the amount of superannuation payments contemplated by each act.

It will be observed that three states base retirement allowances upon the average salary for the past five years without any means of knowing what that will be, whereas in the others a flat amount is provided for each person irrespective of his previous teaching income

Actuarial Funds—Conditions upon which retirement by ac-

TABLE XXIII

SUPERANNUATION BENEFITS

Cash Disbursements Funds

State	Amount of Annual Allowance	Number of Years Service Upon Which Contingent
California	$500	30
Illinois	$400	25
Michigan	½ average annual salary [a] Minimum $300 Maximum $500	30[b]
Minnesota	$350 [c]	20
	$380 [c]	21
	$410 [c]	22
	$440 [c]	23
	$470 [c]	24
	$500 [c]	25
Montana	$600	25
Nevada	$600	30
North Dakota	1/50 of average annual salary [a] multiplied by years of service. Minimum $350 Maximum $750	25
Virginia	½ average annual salary [a] Maximum $500	30
Washington	$480	30

a Average for last five years

b If service has extended less than 30 but more than 25 years, a proportionate amount is paid.

c Only 40 per cent of these amounts are now being paid owing to actuarial insolvency of the fund.

tuarial funds is predicated are summarized in Table XXIV.

Unlike the cash disbursements funds, an age instead of length of service limit customarily governs retirement. This prevents the premature pensioning of teachers who may still be able to render many years of efficient service. Moreover, though retirement is optional at the age designated, it is in most cases compulsory at age 70, thus freeing the schools of superannuated persons whose best teaching days have passed.

The benefits promised by the various actuarial funds are covered in Table XXV.

The terms "pension" and "annuity," as used by actuarial funds, have distinct meanings, the former signifying the annual income purchased by the contributions of teachers accumulated at interest until time of retirement, and the latter the annual payment afforded by state appropriations. Together, they constitute the teacher's retirement allowance. This may be paid monthly or quarterly during the life of the

annuitant only, or a lesser amount may be paid, on condition, in event the teacher dies before total payments have equalled the sum of accumulated contributions at time of retirement, that the difference will be turned over to a designated beneficiary. Some states also incorporate a "last-survivor" feature in the law so that the retirement allowance (for a smaller sum, of course) may be continued to a surviving dependent either in whole or in part.

TABLE XXIV

QUALIFICATIONS FOR SUPERANNUATION RETIREMENT

Actuarial Funds

State	Age		Years of Service	
	Optional at	Compulsory at	Total	In State
Connecticut	60	70	35[b]	15[a] 20[b]
Indiana	60	No provision	40[c]	40[c]
Maine	60	No provision	30[a]	20[a]
Maryland	60	70	No provision	No provision
Massachusetts	60	70	15[a]	15[a]
New Jersey	62	70	35[b]	25[b]
New York	60	70[d]	25[a] 35[b]	No provision
Ohio	60	70	36[b]	No provision
Pennsylvania	62	70	No provision	No provision
Vermont	65—Men 60—Women	No provision	30[a]	20[a]
Wisconsin	50	No provision	No provision	No provision

a This service requirement is in addition to age requirement. In Massachusetts, it applies only to teachers employed in the state at the time the law became effective

b Teachers having met these requirements as to length of service may retire regardless of age In New Jersey, they apply only to teachers employed in the state at the time the law became effective.

c Requirement for full annuity. If service is less than 40 years but more than 25 years, a proportionate sum is paid.

d Not automatically compulsory, but employer may request

Several distinctive and fundamental characteristics of actuarial funds may be drawn from a study of Table XXV. In the first place, retirement allowances are contractual Secondly, a teacher's contributions are kept separate and compounded at a given rate of interest until the teacher retires, when they are used to purchase an annuity. Thirdly, the state promises for each year of current service to match the annuity made possible by a teacher's own savings. Fourthly, the state

TABLE XXV

SUPERANNUATION BENEFITS

Actuarial Funds

State	Annuity Purchased by Member's Contributions	Allowance Provided by State	
		New Teachers[a]	Old Teachers[a]
Connecticut	Actuarial equivalent of accumulated contributions[b]	Pension equal to annuity purchased by teacher	Pension equal to annuity purchased by teacher, plus additional pension to provide total allowance with minimum of $350.
Indiana	Same as above.	Pension for difference between $700 and amount of annuity purchased by teacher's contributions, if age and service conditions are met	Same as for new teachers except that teacher's back contributions for years of prior service must be paid to the fund, with 4% interest.
Maine	Same as above.	Pension equal to annuity purchased by teacher.	Teachers in service in 1924 may elect to receive a non-contributory pension[c] or pay up back assessments and go on the same basis as new teachers.
Maryland	Same as above.	Pension of 1/140 of average salary for last ten years multiplied by number of years of service.	Pension of 1/70 of average salary of last ten years multiplied by years of prior service plus 1/140 of average times years of current service.

[a] New teachers comprise those who have commenced their teaching service since the retirement law was enacted whereas old teachers include those who were teaching at the time of passage. Prior service refers to that rendered before the pension system was established

[b] Teachers' contributions are accumulated at interest, usually 4%, in the same manner as savings deposits, an account being maintained for each teacher, until time of retirement. The accumulated sum is then used to purchase an annuity of such amount as it will buy according to a certain mortality table, generally McClintock's, and a given rate of interest.

[c] Teachers in service at the time the Maine law was enacted may avail themselves of a non-contributory act which provides a pension of $300 for teachers with 35 years experience, $250 for those with 30 years experience and $200 for those with 25 years experience, assuming in all cases that the age of 60 years has been attained.

TABLE XXV—(*Continued*)

State	Annuity Purchased by Member's Contributions	Allowance Provided by State	
		New Teachers[a]	Old Teachers[a]
Massachusetts	Same as above, but if contributions would purchase annuity of more than $500 at age 60, excess is returned in a lump sum	Pension equal to annuity purchased by teacher.	Pension equal to annuity purchased by teacher plus additional pension for prior service not to exceed actuarial equivalent of $500 at age 60
New Jersey	Actuarial equivalent of accumulated contributions.	Pension of 1/140 of average salary for last five years multiplied by years of service. Min $400 for teacher age 62 with 30 years of service.	Pension of 1/70 of average salary of last five years multiplied by years of prior service plus 1/140 of average times years of current service
New York	Same as above	Pension of 1/4 of average salary for last 5 years or any 10 years of consecutive service, but if total service is less than 25 years, then 1/100 of average times number of years. Minimum total retirement allowance is $400 annually if service in state exceeds 25 years	Pension of 1/140 of final average salary multiplied by years of prior service plus same provision for current service as in case of new members plus additional pension to make minimum allowance for retirement at least $400 after 25 years of service
Ohio ..	Same as above	Pension equal to annuity purchased by teacher.	Pension equal to annuity purchased by teacher plus pension equal to 1-1/3 per cent of average salary (not over $2000) for last ten years multiplied by years of prior service.
Pennsylvania ..	Same as above.	Pension of 1/160 of average salary for last ten years multiplied by number of years of service.	Pension of 1/80 of average salary for last ten years multiplied by number of years of prior service, plus 1/160 of average times years of current service

TABLE XXV—(*Continued*)

State	Annuity Purchased by Member's Contributions	Allowance Provided by State	
		New Teachers[a]	Old Teachers[a]
Vermont	Same as above.	Pension equal to annuity purchased by teacher.	Pension equal to annuity purchased by teacher plus arbitrary amount fixed by Retirement Board Total may not exceed 1/2 average annual salary for entire period of service.
Wisconsin	Same as above	Pension purchased by deposits of state which are based upon the contributions of teachers, length of service and salary. (Refer to section covering state contributions)	Pension for current service based upon deposits of state computed in same manner as for new members plus additional amount for prior service calculated as if state had been making deposits during such years and they had accumulated at 4% interest.

assumes some definite liability for a teacher's service prior to creation of the fund Although not evident from the table, it is likewise apropos to note here that the Indiana, Maryland, New York, New Jersey and Wisconsin funds have all taken over the liabilities of their previously existent and financially unsound systems, and that the Connecticut fund is paying straight pensions to teachers who retired before the contributory law was passed The manner in which the costs of these allowances are being met will be reserved for subsequent discussion.

Disability Retirement

Tables outlining the qualifications and benefits applicable to teachers who, after a medical examination, have been found to be mentally or physically unfit to continue their vocation, are presented on this and the following pages

TABLE XXVI
QUALIFICATIONS AND BENEFITS—DISABILITY RETIREMENT
Cash Disbursements Funds

State	Years of Service		Amount of Annual Allowance
	Total	In State	
California	15	15	1/30 of $500 multiplied by number of years in service
Illinois	15	9	$16 multiplied by number of years in service
Michigan	15	5	1/30 of superannuation annuity multiplied by number of years in service.
Minnesota	15	10	$17 50 multiplied by number of years in service [a]
Montana	15	15	$24 multiplied by number of years in service
Nevada	15	15	$20 multiplied by number of years in service
North Dakota	15	15	1/50 of average salary for last five years multiplied by years in service. Minimum $350 Maximum $750
Virginia	20	20	1/2 average annual salary for last five years Maximum $500.
Washington	10	8	$16 multiplied by number of years in service, to be paid for 2 years only
	20	12	$16 multiplied by number of years in service, payable throughout rest of life

a Only 40 per cent of the amount stated in the law is now being paid.
Note Some states, as Illinois, North Dakota and Virginia, require a disabled teacher to comply with the same provision regarding minimum total contributions as is applicable to one retiring on age

TABLE XXVII

Qualifications and Benefits—Disability Retirement

Actuarial Funds

State	Years of Service: Total	Years of Service: In State	Amount of Annual Allowance
Connecticut	10	10	Actuarial equivalent of teacher's savings, plus pension equal to 1/30 of pension which would be payable upon retirement at 60, multiplied by number of years in service
Indiana	10	10	$500, but not more in any case than 5/8 of contract salary for year in which disability occurs
Maine	6	6	Actuarial equivalent of teacher's savings, plus actuarial equivalent of state's contributions, plus any extra amount the Retirement Board allows. Total not to exceed 1/2 average annual salary for entire teaching period.
Maryland	5	5	Actuarial equivalent of teacher's savings, plus pension, which, with above, will provide total allowance of 90% of 1/70 of average salary for last 10 years times years of service Minimum is 1/4 of average and maximum 90% of 1/70 of average times number of years which would be credited if service should continue until age 60.
Massachusetts	20	20	Actuarial equivalent of teacher's savings, plus 1/30 of pension which would be due at 60 if teacher had paid 30 annual assessments, times number of years in service. Minimum $8 33 per year of service.
New Jersey	10	10	Actuarial equivalent of teacher's savings, plus pension which will produce retirement allowance of 1/70 of average salary for last five years, multiplied by years in service Minimum $300 or 30% of salary. Maximum 90% of what retirement allowance would have been at 62
New York	15 or 20	15 or 10	Actuarial equivalent of teacher's savings, plus pension of 1/5 of average salary for last 5 years or any 10 years of consecutive service, but not to exceed 80% of what allowance would have been at 70, plus further pension of 1/140 of final average salary times years of prior service.
Ohio	10	10	Actuarial equivalent of teacher's savings, plus pension, which, with above, will provide amount equal to 1.2% of average salary for last ten years multiplied by years of total service Minimum is 30% of final average salary and maximum 90% of what retirement allowance would have been at 60

TABLE XXVII—*Continued*

State	Years of Service: Total	Years of Service: In State	Amount of Annual Allowance
Pennsylvania	10	10	Actuarial equivalent of teacher's savings, plus pension to produce 1/90 of average salary for last 10 years times years of service Minimum is 30% of final salary and maximum 8/9 of what retirement allowance would have been at age 62
Vermont	6	6	Same as for Maine
Wisconsin .	5	5	$25 per month, plus actuarial equivalent of teacher's and state's contributions

Payments in Case of Death

The amounts which will be paid to the beneficiaries of a member who dies before attaining the age of retirement are set forth in Table XXVIII.

TABLE XXVIII

REFUNDS IN EVENT OF DEATH

State	Amount of Refund
Cash Disbursements Funds	
California..	No provision.
Illinois	No provision
Michigan	. No provision
Minnesota	50% of teacher's actual contributions
Montana	No provision
Nevada	No provision
North Dakota	No provision
Virginia	No provision
Washington .	50% of difference between teacher's actual contributions and sum of any disability benefits paid to teacher
Actuarial Funds	
Connecticut .	Teacher's savings plus interest.
Indiana	Teacher's savings plus interest
Maine	Teacher's savings plus interest, plus state's contributions with interest after six years of service.
Maryland .	Teacher's savings plus interest, plus 50% of average salary for last ten years
Massachusetts	Teacher's savings plus interest
New Jersey	Teacher's savings plus interest.
New York	Teacher's savings plus interest.
Ohio	Teacher's savings plus interest.
Pennsylvania	Teacher's savings plus interest
Vermont . ..	Same as for Maine
Wisconsin . .	Teacher's and state's combined deposits accumulated with interest.

Although but two of the cash disbursements funds make any return to beneficiaries whenever a contributor dies before reaching the retirement age, all of the actuarial funds return at least the full amount paid in by the teacher together with compound interest, and, within certain limitations, three also turn over the contributions of the state.

Withdrawal Privileges

The amounts which a member of the fund will be permitted to withdraw upon resignation or dismissal from his position are shown in the following table.

TABLE XXIX

WITHDRAWAL PRIVILEGES

State	Amount of Refund
Cash Disbursements Funds	
California	No provision.
Illinois	If length of service is less than 15 years, 50% of teacher's contributions, without interest.
Michigan	50% of teacher's contributions, without interest.
Minnesota	50% of teacher's contributions, without interest.
Montana	No provision.
Nevada	All of teacher's contributions in excess of $60, without interest
North Dakota	50% of teacher's contributions, without interest.
Virginia	No provision.
Washington	All contributions of teacher are returned, without interest, in case of discharge only.
Actuarial Funds	
Connecticut	Teacher's savings plus interest
Indiana	Proportion of teacher's contributions returned varies from 25% after 1st year to 100% after 10 years, without interest. Provisions differ as to amounts paid in under old act.
Maine	Teacher's savings plus interest, plus state's contributions with interest after six years of service.
Maryland	Teacher's savings plus interest.
Massachusetts	Teacher's savings plus interest
New Jersey	Teacher's savings plus interest.
New York	Teacher's savings plus interest
Ohio	Teacher's savings plus interest.
Pennsylvania	Teacher's savings plus interest.
Vermont	Teacher's savings plus interest if member of fund less than six years If member more than six years, combined teacher's and state's deposits are returned, without interest.
Wisconsin	Annuity purchased by combined deposits of teacher and state, together with interest, payable commencing at age 50 unless teacher is disabled.

As in the case of death benefits, a vast difference here again prevails between the practices of the two types of funds. Refunds under the cash disbursements plan are very much limited whereas all actuarial funds, except that of Indiana, return the full amount of the teacher's savings plus compound interest. Under certain circumstances, three funds even grant to the teacher certain benefits from the sums contributed by the state.

Methods of Meeting Costs

Except in Michigan, where teachers carry the entire burden of the retirement system, the costs of benefits are shared jointly by teachers and states. The methods devised for measuring and apportioning the financial responsibility for obligations of the fund are radically different for the two systems and constitute the primary ground for distinction between them. This will become apparent from a study of the amounts contributed (1) by teachers and (2) by states, for each type of fund.

Teachers' Contributions

A deduction for his share of the pension cost is taken from each teacher's salary by local school officials. The amounts thus obtained are then either remitted to the fund or charged against any state appropriation for that particular school district, in which latter case the state pays the necessary sum directly into the fund

Cash Disbursements Funds.—Salary deductions for teachers coming under funds of this type are shown in Table XXX.

Five of the states covered in the tabulation referred to increase the amount of a teacher's assessments as his period of service lengthens, thus placing more of the burden upon those persons who are most likely to receive benefits from the act. In view of the illiberal provisions respecting death and withdrawal refunds, this is probably justifiable, but as the larger payments come just before retirement, it nevertheless means that interest accretions on such payments are relatively small.

Although retirement under all cash disbursements systems is contingent solely upon length of service, the amounts paid in by

each contributor bear no relation to age This is so manifestly unscientific as to need no elaboration.

TABLE XXX

TEACHERS' CONTRIBUTIONS

Cash Disbursements Funds

State	Period of Service	Amount of Annual Assessment
California	No provision	$12
Illinois	Over 0 but under 10 years	$ 5
	Over 10 but under 15 years	$10
	Over 15 but under 25 years	$30
Michigan [a]	Over 0 but under 5 years	1/2 of 1% of salary—Maximum $5
	Over 5 but under 15 years	1% of salary—Maximum $10
	Over 15 years	2% of salary—Maximum $20
Minnesota [b]	Over 0 but under 5 years	$5
	Over 5 but under 10 years	$10
	Over 10 but under 20 years	$20
	Over 20 but under 25 years	$30
Montana	No provision	$12
Nevada	No provision	$12
North Dakota	Over 0 but under 10 years	1% of salary—Maximum $20
	Over 10 but under 25 years	2% of salary—Maximum $40
Virginia	No provision	1% of salary
Washington	Over 0 but under 10 years	$12
	Over 10 but under 20 years	$24
	Over 20 but under 30 years	$36

a Assessments upon teachers may be doubled for those having from 0–5 and 5–15 years of service, and increased to 3 per cent of salary with a maximum of $30 for those having taught more than 15 years, if the Retirement Board deems necessary. As yet, this has not been done.

b If teacher's salary exceeds $1500 per annum, contribution is 1½ per cent (Maximum $20) for first ten years, and 2 per cent (Maximum $40) for each succeeding year.

Actuarial Funds—The following table indicates the contribution bases of the actuarial funds.

In spite of the lack of uniformity as to detail, all of the funds covered in Table XXXI are alike in basing the teachers' assessments upon salary. Moreover, the contributions of each teacher are in all states accumulated at compound interest and used, at the time of retirement, to purchase an annuity for whatever amount they will buy. This is true even in the three states—Maryland, New Jersey and Pennsylvania—which endeavor to levy assessments so the annuity provided by the teacher's own payments will bear some definite relationship to his final salary.

TABLE XXXI

TEACHERS' CONTRIBUTIONS

Actuarial Funds

State	Annual Assessment			Maximum Annuity to be Provided
	Basis for Computing	Minimum	Maximum	
Connecticut	5% of salary.	$25	$100	$500 at age 60
Indiana. . .	% of salary to provide not less than 3/7 of a $700 annuity for a teacher age 60, with 40 years of service If teacher wants state credit for prior service, back contributions plus 4% interest must be paid in cash or charged as a lien against the annuity.			
Maine .	5% of salary	$20	$100	No provision
Maryland . .	% of salary to provide annuity at 60 equal to 1/140 of average annual salary for last ten years times years of service, prior service being paid for by state.			
Massachusetts	Set by Board between 3 and 7% of salary. 5% is rate now levied	$35	$100	$500 at age 60
New Jersey	% of salary to provide annuity at 62 equal to 1/140 of average annual salary for last five years times years of service, prior service being paid for by state.			
New York .	4% of salary.	No provision	No provision	No provision
Ohio .	4% of salary.	No provision	$ 80	No provision
Pennsylvania	% of salary to provide annuity at 62 equal to 1/160 of average annual salary for last ten years times years of service since enactment of the law			
Vermont .. .	% of salary fixed by Board Not to exceed 5%	$16	$100	No provision
Wisconsin...	5% of salary.	No provision	No provision	No provision

State Appropriations

Financial aid may be extended by the state either to meet expenses of administration or to make possible the payment of benefits, or both.

Cash Disbursements Funds.—All operating costs are borne solely by teachers in Michigan, entirely by the state in Montana, jointly by both in Washington, and from the general treasuries of the funds in all other states having cash disbursements systems.

Except as mentioned in the preceding paragraph, no definite provision is made in the enabling acts for state assistance in Illinois, Michigan, Montana, Virginia and Washington, although all funds except that of Michigan contemplate the re-

ceipt of legislative appropriations. The proceeds from 5 per cent of the inheritance tax in California, from a special property tax of 1/20 of 1 mill in Minnesota, from an ad valorem tax of 5 mills on every $100 of taxable property in Nevada, and from a levy upon counties of 10 cents for each child of school age in North Dakota, are designated for those funds. No effort is made to evaluate the liabilities of the funds or to apportion state aid to them Whatever amounts are granted are purely gratuitous and are not forthcoming because of any specific contractual obligations underwritten by the state

Actuarial Funds—Expenses of administration are directly assumed by all states having actuarial funds, other than New York and Ohio. New York passes this charge on to employers of teachers, whereas Ohio, while assuming a portion, assesses each contributor an amount which may not exceed $1 per year Any difference between the rate of interest earned by the New Jersey fund and the 3½ per cent allowed on deposits which are withdrawn before retirement is retained to help meet operating expenses.

The principal obligation undertaken by the states having actuarial funds is the payment of the pensions enumerated in Table XXV, although in some states, as New York, Ohio and Pennsylvania, the entire cost or part of it is passed on to school districts.

The establishment of a pension system such as those under consideration involves at least two, and possibly three, types of liability In the first place, there is a " current liability " to take care of future retirement costs based on service rendered at the present time and for which provision should be made during the year in which the service is rendered. Secondly, there is an "accrued liability" resulting from the years of service put in by teachers prior to the passage of the act, for which a pension is granted Thirdly, if the fund is paying pensions to teachers retired under previous measures, there is an additional " accrued liability " to that extent.

To attain strict actuarial solvency, a state would need to set aside a sum equal to all " accrued liabilities," and then annually,

to appropriate, on account of "current liabilities," an amount which, allowing for interest, deaths, disabilities and withdrawals,[7] would be adequate to provide the pension promised at time of retirement.[8] Appropriating enough at one time to meet all "accrued liabilities" would entail a severe drain upon the state treasury, nor is it essential that all this money be on hand at the time the fund begins activities since pension payments will be distributed over many years to come Accordingly, those states which have sought to handle this problem scientifically are spreading the cost over a period of from 30 to 40 years. The state legislature is then asked to appropriate each year a "deficiency contribution" which will amortize the prior service liabilities. Together with the "normal contribution," designed to care for current service liabilities, assuming both are computed scientifically and accurately, this should ultimately place the fund upon an actuarially sound footing when only contributions on account of current service would be further necessary to pay all liabilities as incurred

Maryland, New Jersey, New York, Pennsylvania, and Wisconsin provide for financing their obligations in the scientific manner described Although the Indiana act stipulates that the board of trustees shall ascertain the state's liability for prior service "and shall distribute the payment of this liability

[7] Also for an increase in the salary scale in those states which base the pension upon the teacher's final salary.

[8] Since Maine, Vermont and Wisconsin are the only states which permit teachers to benefit from the state's contributions in the event they either die or withdraw before retirement, the state makes its deposits outright to the teacher's account, subject to the conditions elsewhere stipulated, instead of applying death and withdrawal probability factors in order to set aside just enough to provide for those who actually reach retirement age or become disabled. In Maine and Vermont the amount deposited by the state matches the teacher's contributions whereas in Wisconsin it is equal to "the following percentage upon the required deposit made by such teacher during the fiscal year, namely, to fifty per cent of the required deposit add five per cent of the required deposit for each year of teaching experience excluding the year for which deposit is made, and deduct one per cent of the required deposit for each one hundred dollars of compensation received during the fiscal year in excess of $1200, provided that the total shall not exceed 200 per cent of the required deposit; provided, that in computing the state deposit, any amount of required deposit on account of any amount of annual compensation in excess of $3000 shall be disregarded in applying the above percentages. If the teacher received compensation for service as a teacher for not less than a school year during the fiscal year the state deposit shall be increased $25."

over a period of years which will be equitable to the state and to the fund," no definite basis for doing so appears to have been adopted. The state does, however, make an annual appropriation to the fund. At the time a teacher is pensioned for disability or age, Connecticut appropriates an amount equivalent to the reserve on the pension, Massachusetts appropriates just enough to meet pension payments falling due, and Ohio, though previously operating under the same plan as the first five states named, now follows the practice of Connecticut so far as teachers with prior service are concerned, but appropriates a "normal contribution" annually to take care of pension costs on service rendered that year. As Maine still has a non-contributory pension law in effect for teachers in service prior to passage of the present act, its accrued liabilities are limited to those teachers who may elect to come under the contributory system. Subject to an annual maximum of $35,000, it appropriates an amount equal to the teachers' contributions for current service and any back assessments paid by teachers desiring credit for prior service Vermont, within a limit of $25,000 per year, also appropriates enough to match teachers' contributions and to provide any pension for prior service the Board may choose to vote.

Adequacy and Equity of Methods for Financing Costs

Only an actuarial valuation of the present and future liabilities for each fund, taking into account possible interest earnings, probabilities of death and withdrawal, and in some states expected increases in the salary scale, would serve to demonstrate the exact degree to which methods of financing costs are adequate Such an investigation is beyond the realm of this survey. Fortunately, however, there are other means, not so accurate perhaps, but nevertheless of practical value in suggesting whether the principles which underlie the operation of these funds are sound. Again, our two-fold classification is significant.

Cash Disbursements Funds

The financial history of all cash disbursements funds has been very similar Receipts from assessments, on one side of the ledger, have not increased from year to year as rapidly as payments for pensions, on the other side, though the latter aggregated much less at the start. A point is finally reached in course of time when payments exceed contributions Unless the state comes to the rescue, the balance which has been built up in the early years then begins to dwindle, and will eventually disappear. As yet no fund has been in existence sufficiently long for the final stage to have been reached but many of them have passed the point where teachers' contributions meet current pension payments The figures for California and Virginia, selected because teachers' contributions are a flat sum in the former state and a percentage of salary in the latter, are typical.

TABLE XXXII

TEACHERS' CONTRIBUTIONS AND PENSION PAYMENTS

California and Virginia

Year Ending June 30	California		Virginia	
	Teachers' Contributions	Payments for Pensions	Teachers' Contributions	Payments for Pensions
1909			$21,586	$ 8,611
1910			29,980	24,453
1911			35,644	13,478
1912			30,091	32,904[a]
1913			35,077	38,977
1914	28,696	35,976	37,768	42,895
1915	212,960	85,991	40,629	47,593[a]
1916	129,998	139,970	45,436	43,834
1917	164,307	138,048	47,858	57,948
1918	196,816	240,472	53,210	61,618
1919	195,367	269,669	57,654	65,380
1920	183,565	302,388	74,531	67,900
1921	239,912	412,530[b]	92,858	73,272
1922	249,622	262,253[c]	118,987	80,215
1923	269,687	371,607	121,071	81,113
1924	293,513	403,338	121,254	102,186
1925	382,509	426,787	120,742	112,924
1926	406,527	457,095	125,648	129,665

a Pensions were pro-rated in these years.
b Payments for fifteen months.
c Payments for nine months.

TABLE XXXIII

COMPARISON DEMONSTRATING INADEQUACY OF TEACHERS' CONTRIBUTIONS TO PROVIDE PROMISED PENSIONS

Cash Disbursements Funds

State	Number of Years for Which Contributions Are Accumulated	Total Accumulated Contributions at 4% Interest	Annuity Purchaseable at age 60 with Accumulated Contributions [a]		Pension Promised by Fund	Average Age At Retirement [b]
			Men	Women		
California	30	$ 700	$ 67	$ 60	$500	—
Illinois	25	570	55	49	400	57
Michigan	30	716[c]	69	61	425[d]	57
Minnesota	25	635[e]	61	54	500	59
Montana	25	520	50	44	600	55
Nevada	30	700	67	60	600	55
North Dakota	25	1,283[c]	123	109	576[d]	53
Virginia	30	467[f]	45	40	400[f]	—
Washington	30	1,220	117	104	480	63

[a] According to McClintock's Tables of Mortality among Annuitants, and 4 per cent interest.

[b] Data for all states except Montana were obtained from the February, 1927 report of The National Council of Teachers' Retirement Systems. The Montana figure was supplied by the State Department of Public Instruction.

[c] The assumption is made that teachers are paying 5, 10 or 20 dollars per year in Michigan according to period of service, and 20 or 40 dollars in North Dakota. Since contributions are based on a percentage of salary, they may actually be paying less.

[d] Actual average allowance paid upon retirement, as shown by the National Council report above cited.

[e] Based on contributions of teachers with salaries of less than $1500 per year.

[f] The average salary used in calculating the teachers accumulated contributions as well as the pension promised by the fund was $800, this being derived from a table appearing on page 58 of a booklet entitled "Retiring Allowances for Officers and Teachers in Virginia Public Schools," heretofore mentioned, which showed the average annual salary of school employees in 1923 to be $806.34.

The reason for this situation is that teachers' contributions are sufficiently large to provide but a small part of the pensions promised, even if credit for prior service be neglected. Table XXXIII demonstrates just how much of a pension could be provided from a teacher's own deposits in each of the cash disbursements funds, if all payments were accumulated at 4 per cent compound interest for the entire period of service required, and then used to purchase a whole life annuity at age 60, according to McClintock's Tables of Mortality among Annuitants, and 4 per cent interest, ignoring loading for administrative expenses

One criticism of the above table is that the teacher is not given the benefit of forfeitures from those who die or withdraw On the contrary, no allowance is made for the cost of the disability feature. Moreover, the interest rate assumed is rather high for a long period of time and the age of retirement is computed at 60, whereas, in all states but Washington, the actual average is less. But if we assume that forfeitures from death or withdrawal accruing to each teacher who survives until retirement would equal the amount accumulated to that time by the teacher herself, which, on the basis of such calculations in actuarial fund states, would seem to be a conservative estimate; and if we entirely disregard the expense of paying disability claims, as well as the fact that retirement actually occurs under age 60 in most states, and further assume 4 per cent interest to be a reasonable rate for all calculations, the deficit is still strikingly apparent.

However, state aid has not yet been taken into account. Based on our rough estimate of what the teachers provide through their own contributions, it will be seen that the public should contribute anywhere from two to six times as much, depending upon the state. But not one of these states attempts to measure the real cost and govern its appropriations accordingly nor does it appropriate an amount at all commensurate with the liability it would appear to have incurred. The actual appropriations in 1926 for those states from which the figures could be procured are compared below with contributions of teachers during the same year.

TABLE XXXIV

PAYMENTS TO RETIREMENT FUNDS

	By State	By Teachers
California	$321,157	$406,527
Illinois	302,777	267,332
Michigan	Nothing	201,063
Minnesota	70,060	126,739
Montana	Nothing	73,383
Virginia	10,000	125,648

The cash disbursements funds are not only inadequately but inequitably financed No consideration is given to the age at retirement in spite of the fact that age has a most important bearing upon the cost. Furthermore, payments of younger teachers are now being utilized to provide pensions for those retired, without any assurance that funds will be on hand to pay pensions to them in turn when their periods of service have been completed.

When the state creates a teachers' pension system, a moral, if not a legal, duty rests upon it to set up a sound method for financing liabilities. Certainly, there are justifiable grounds for severe and relentless criticism of the cash disbursements plan, and as will be demonstrated in a succeeding section, many states are now facing the disastrous consequences of violating sound pension principles

Actuarial Funds

Inasmuch as all actuarial funds provide for maintaining a separate account with each teacher in which credit is given for contributions deposited and interest earned, the principle underlying the accumulation of a teacher's payment for an annuity differs in no respect from that of a savings bank deposit. At the time of retirement, however, the sum thus provided during the teacher's earning period is used to secure a whole life annuity (unless one of the modified forms is elected) for its actuarial equivalent according to some mortality table, accepted by the retirement board, and an assumed rate of interest, generally 3½ , or 4 per cent. If the mortality table and interest rate are conservative and the membership is sufficiently large to insure a distribution of risk, the plan should be above reproach.

The Maine and Vermont funds are both optional and small in size, the latter having only 412 members in 1926, of which 16 were on the retired list Data for Maine were unavailable but the fund is just getting under way. Whether annuities computed according to McClintock's Tables and 3½ per cent interest in these two states will eventually cost the funds more or less than the amounts accumulated by each teacher remains to be seen. Other actuarial funds have much larger memberships.[9]

In line with the care exercised by every actuarial fund to keep individual accounts, and to prevent the assessments levied upon a teacher in service from being used to provide an annuity for another teacher who has retired, we have already noted that five states are endeavoring to meet their own shares of the pension cost by means of "normal" and "deficiency" contributions. Inasmuch as the percentages of payrolls appropriated for this purpose are based upon extensive actuarial investigations, it is beyond our province to pass judgment upon their accuracy One excellent safeguard to both teachers and taxpayers, nevertheless, is the requirement appearing in all of these laws, that an actuarial valuation and examination be made at stipulated periodic intervals, ranging from three to five years. In some states more frequent examinations are demanded in the early years of operation with the proviso that thereafter they shall be made triennially or quinquennially.

Indiana is not meeting the problem of the state's share scien-

[9] In 1926, the membership and total number of persons on the pension rolls of the compulsory actuarial funds, according to figures given in the February, 1927, report of the National Council of Teachers' Retirement Systems, were.

	Total Membership	Total Retired
Connecticut	8,411	186
Indiana	13,000	485
Massachusetts	18,509	852
New Jersey	19,830	1062
New York	31,138	1996
Ohio	43,451	1829
Pennsylvania	61,437	1416
Wisconsin	18,000	565

Maryland's law was not enacted until 1927, so no figures for that state are yet obtainable

tifically and Massachusetts and Connecticut, to a large extent, are passing on to the future the costs of pensions for present and past service. The cost to Connecticut varies each year according to the number of persons who may retire as well as the amounts of their pensions, since the reserve for such is then appropriated. Under the Massachussetts plan of meeting pension payments only as incurred, the cost to the state increases each year. State appropriations for both these funds since their inception follow:

TABLE XXXV

ANNUAL APPROPRIATIONS FOR PENSION SYSTEM

	Connecticut	Massachusetts
1914		$ 25,109
1915		63,851
1916		91,217
1917		114,931
1918		141,467
1919	$235,672	166,416
1920	70,522	186,295
1921	111,761	233,697
1922	17,938	312,093
1923	173,322	363,372
1924	101,560	400,471
1925	202,203	458,044
1926	108,531	528,460

Just when the peak will be reached in either state, or what its amount will be, are purely matters of conjecture as no actuarial valuation of all liabilities has ever been made so far as the writer has been able to ascertain [10]

When Ohio abandoned its actuarial "deficiency contribution," although retaining the "normal contribution," and substituted for it the plan of appropriating the reserve for prior service pensions at the time the first payments under them are to be made to members, it substituted an uncertain for a previously certain contribution, and deferred until further in the future the final amortization of the cost. If a substantial proportion of the teachers in Maine and Vermont should elect to become members of their optional funds, the maximum ap-

[10] The Connecticut Retirement Board did have an actuarial examination in 1923 to determine whether the tables adopted for computing reserves at retirement were adequate, but this, of course, dealt only with the liability of the state to those teachers who had actually begun to draw pension payments.

propriations permissible by law would be inadequate to match their contributions. Vermont's liability for teachers with prior service is neither definitely known nor specifically financed. It is encouraging to note that provision for periodic actuarial examination appears in all the actuarial fund laws but those of Connecticut and Massachusetts

Financial Status

In 1926, the total income of all cash disbursements funds approximated $2,500,000 and expenditures aggregated roughly $1,700,000 Actuarial funds, however, received about $31,500,000 and paid out $7,700,000. The total assets at the end of 1926, or fiscal period ending therein, were less than $6,500,000 for the first group and more than $110,000,000 for the second. These figures, considered in relation to the fact that the combined membership is 135,000 and 215,000 respectively, furnish prima facie evidence that cash disbursements funds are insufficient if actuarial funds are not redundant, since the differences in the benefits promised could not account for the disparity.

A mere statement that a pension fund has a substantial balance in its treasury is meaningless as a proof of solvency. All cash disbursements funds have such. The information of consequence is the present value of future liabilities and of the assets available to meet them Unfortunately, these data are not available for all, so the summary which ensues will be somewhat sketchy.

Cash Disbursements Funds

In California, on November 30, 1924, the present value of annuities already entered upon was $4,246,950 and of probable annuities to be granted teachers then in active service $46,211,940 As against these liabilities, totalling $50,458,890, the assets on hand plus the present value of all probable future income, including that from the inheritance tax as well as teachers' contributions, amounted to $17,610,437. On this basis, the deficit as of that date was $32,848,453. Un-

doubtedly the shortage is much greater now, for a valuation five years previous to that had shown a deficiency of $25,613,708.[11] An act passed by the 1927 Legislature created a commission to study the operations of the fund and report to the 1929 session.

Several years ago the Minnesota fund was estimated to have $10,000,000 of liabilities and but $1,000,000 of assets. Nothing has been done to remedy this situation except the pro-rating of pensions, although an unsuccessful attempt was made to have a sound law enacted.

The Virginia fund has been obliged to scale down pension payments in two different years. Even if the law should be repealed, "the cost to the State of continuing the pensions of the teachers who are already retired is estimated to exceed $2,000,000."[12] An effort to substitute a sound measure for the present one was defeated in the last legislative session.

Actuarial Funds

Accrued liabilities for which deficiency contributions must be appropriated, still aggregated, in 1926, $9,490,238 for Indiana, $34,020,252 for New Jersey, $45,149,257 for New York, $37,000,000 for Pennsylvania and $5,599,157 for Wisconsin. These figures are not complete but they do bear witness to the tremendous weight of prior service obligations and emphasize the absolute necessity of facing them squarely and financing them properly. No fund will be actuarially solvent in the strictest sense of the word until every dollar's worth of liability is balanced by a dollar's worth of assets, and every inducement should be given by state legislatures to those which are endeavoring to accomplish this in a sound manner.

Investments

As pension funds are recipients of many millions of dollars which must be held for long periods of time, regulation of investments is a feature of every law. Securities legal for sav-

[11] The 1919 valuation was made by Wm Leslie and that of 1924 by S. Gundelfinger.

[12] Retiring Allowances for Officers and Teachers in Virginia Public Schools, page 56

ings institutions are permitted for the funds of California, Connecticut, Maine, Michigan, Nevada, New York, Pennsylvania and Vermont; those legal for school funds are acceptable for the systems of Illinois, Minnesota, Montana, Virginia and Washington; whereas in Maryland and Wisconsin the same securities as available to life insurance companies, in Massachusetts and New Jersey the same as for sinking funds of the state and in North Dakota the same as for trust funds of the state, are prescribed for pension fund investments. Investments of the Indiana fund must be made in "interest-bearing securities of the United States, or of any state or territorial possession of the United States; or in any security lawfully issued by any state or county, township, city or other municipal corporation within the United States" and those of the Ohio fund in "bonds of the United States, the state of Ohio or of any county, city, village or school district of the state of Ohio."

ADMINISTRATION

Supervision or administration of the fund in states having cash disbursements systems rests with the state department of education or a specially created retirement fund board. California, Nevada and Virginia follow the former plan and the other six states the latter. Teachers are represented on the board in five of the six states but in only one—Minnesota—are they elected by contributors to the fund[13] Likewise, in only

[13] The personnel of the various boards having jurisdiction over cash disbursements funds are·

Illinois—Board of Trustees—5 members—State Superintendent of Public Instruction, State Treasurer, and three contributors or annuitants appointed by the Governor.

Michigan—Teacher's Retirement Fund Board—6 members—State Superintendent of Public Instruction and five others, appointed by the Governor, one of whom must be a woman teacher

Minnesota—Board of Trustees—5 members—State Superintendent of Education, State Auditor, Attorney General and two members of fund elected by teachers

Montana—Retirement Salary Fund Board—3 members—Superintendent of Public Instruction, State Treasurer and Attorney General

North Dakota—Board of Trustees—State Superintendent of Public Instruction, State Treasurer, and three teachers appointed by the Governor, one of whom must be a woman

Washington—Board of Trustees—5 members—State Superintendent of Public Instruction, State Insurance Commissioner and three members of fund appointed by State Board of Education

one of the nine states, namely, Washington, is the commissioner of insurance a member of the board.

Retirement boards, with a membership ranging between 3 and 7, operate the actuarial funds. These are likewise composed of state officials and teachers,[14] but the latter are in all states, except Indiana, elected by contributors, through the teachers' retirement associations to which all teachers must belong By this means, those most interested in the success of the funds are given a voice in their management. Not more than two teachers may be members of the Indiana Board

[14] The constituency of the boards administering actuarial funds follows:

Connecticut.—Teachers' Retirement Board—5 members—Secretary of State Board of Education, State Insurance Commissioner, State Bank Commissioner, and two teachers elected by members of the retirement association

Indiana—Board of Trustees—5 members—all appointed by the Governor—not more than two to be teachers.

Maine—Teachers' Retirement Board—7 members—State Superintendent of Public Schools, State Treasurer, Attorney General, State Insurance Commissioner, State Bank Commissioner, and two teachers elected by members of the retirement association.

Maryland.—Board of Trustees—5 members—State Superintendent of Education, State Treasurer, State Comptroller, and two teachers elected by members of the retirement association.

Massachusetts—Teachers' Retirement Board—3 members—Commissioner of Education, one teacher elected by members of the retirement association and a third chosen by the other two.

New Jersey—Board of Trustees—7 members—State Commissioner of Education, State Treasurer, one member appointed by the Governor, three elected by members of the retirement association and a seventh chosen by the other six.

New York.—Retirement Board—7 members—one executive officer of a bank elected by the Board of Regents of the University of the State of New York, two administrative officers of the state school system appointed by Commissioner of Education, State Comptroller or member appointed by him, and three teachers elected by members of the retirement association

Ohio—Retirement Board—5 members—State Superintendent of Public Instruction, State Auditor, Attorney General, and two teachers elected by members of the retirement association

Pennsylvania.—State School Employees' Retirement Board—7 members—State Superintendent of Public Instruction, State Treasurer, one member appointed by the Governor, three elected by members of the retirement association, and a seventh chosen by the other six.

Vermont—Teachers' Retirement Board—5 members—State Commissioner of Education, State Treasurer, State Commissioner of Banking and Insurance, and two teachers elected by members of the retirement association

Wisconsin—Annuity Board of 7 members, with which a public school retirement board, a normal school retirement board and a university retirement board, each of 5 members, cooperate. The Annuity Board consists of State Superintendent of Public Instruction, State Commissioner of Insurance and five others appointed by the Governor

but they are appointed by the Governor. Maine, Maryland, New Jersey, Pennsylvania, and Vermont place the state commissioner of insurance upon the board.

Elected members of the Minnesota Board of Trustees receive $5 per day compensation. The members of all others serve without pay but are allowed necessary expenses and, in the case of teachers, reimbursement for any loss of salary they may sustain.

Assets are entrusted to the custody of the Board of Trustees in Indiana and the State Second Auditor in Virginia. State treasurers are custodians of all other funds.

Cash disbursements funds are not subject to regulation or supervision by the insurance departments of their respective states nor required to report thereto, although, as has been noted, the insurance commissioner is a member of the Washington Board of Trustees The actuarial fund laws of New Jersey, New York and Pennsylvania specifically grant the right of supervision to the state department of insurance whereas those of Connecticut, Maine, Massachusetts, Ohio and Vermont require the funds to file reports with such department.

State Liability for Solvency

No responsibility for financial success is definitely assumed by any state having a cash disbursements fund. On the contrary, the laws of Michigan, Minnesota, North Dakota, Virginia and Washington authorize administrative officials to prorate pension payments if funds are inadequate. This has already been done in Minnesota and Virginia. Within limits already designated, fund officials in Michigan are further given the right to increase the amount of assessments levied upon teachers

In general, the situation in the actuarial fund states is the reverse. Maine and Vermont have, it is true, restricted the state's liability within very narrow bounds, but specific benefits promised by all other states to match contributions of teachers are in the nature of contractual obligations which could not be repudiated without discredit. Whether a state like Massa-

chusetts is warranted in placing upon taxpayers of the future the financial burden of paying pensions for service rendered in the past and present is highly questionable from the standpoint of public finance, but it is doubtful if future legislatures, indignant at the size of the appropriations necessitated by the practice, could, without injuring the state's integrity, refuse to accept the burden.

Whether any deficit which might be entailed by investment losses, by divergence of actual mortality, disability or other ratios from the expected, or by other causes, remote though they be, would be shouldered by the state is not clear from most laws. Maryland and Pennsylvania, to dispel any doubt, have incorporated, however, a clause in their acts covering the point. The wording is quite similar, so only that of Pennsylvania's law will be quoted. It reads: "Regular interest charges payable, the creation and maintenance of reserves in the contingent reserve fund, and the maintenance of employees' annuity reserves as provided for in this act, and the payment of all retirement allowances and other benefits granted by the retirement board under the provisions of this act, are hereby made obligations of the Commonwealth of Pennsylvania."

STATE EMPLOYEES' RETIREMENT FUNDS

Although Connecticut and Maine pay straight pensions to retired state employees, only four states [15]—Massachusetts, New Jersey, New York and Pennsylvania—have contributory systems. All of these maintain individual accounts for each employee's contributions and provide for actuarial funds similar in character to those just described for teachers.

Persons Covered

The funds primarily cover regular and permanent employees of the state, with certain exceptions, such as judges in Massa-

[15] The Massachusetts fund was established in 1912, that of New Jersey in 1922, of New York in 1921 and of Pennsylvania in 1924. The material presented in this section was obtained from the enabling acts, annual reports and correspondence with executive officials of the retirement systems.

chusetts and Pennsylvania, but counties and municipalities in New Jersey and New York may elect to have their employees included In such cases, a proportionate part of the administrative expense, and, in addition, the actuarial cost of the free pensions granted to county or municipal employees must be borne by the respective employer

Benefits Promised

Provisions as to retirement and disability benefits, death refunds and withdrawal privileges resemble very closely those discussed for teachers' pensions. There are a few important differences however. In the first place, Massachusetts, New Jersey and New York pay, in lieu of workmen's compensation benefits, a substantial income for accidental disability incurred in performance of duty, without regard to length of service. Moreover, if an employee should die as the result of such accident, a pension is granted to the widow or children. Secondly, should a New York employee be "discontinued from state service . . . through no fault of his own after having completed twenty years of total service" or a Pennsylvania employee "be discontinued from service, not voluntarily, after having completed ten years of total service," he will be entitled to certain benefits from state contributions as well as from his own accumulations Thirdly, a Pennsylvania contributor may choose either of two bases upon which to contribute and to receive pension payments. Table XXXVI summarizes the principal benefits and qualifications for their enjoyment

Manner of Meeting Costs

Employees in Massachusetts now contribute 5 per cent of their annual salary not in excess of $1560, but if the amount thus accumulated is more than sufficient to purchase at retirement an annuity equal to one-fourth of the average annual salary for the last five years preceding retirement, the excess is returned in a lump sum. Contributions in New Jersey and New York are such percentages of salary as will provide at the

TABLE XXXVI

BENEFITS AND QUALIFICATIONS FOR THEIR ENJOYMENT

State Employees' Retirement Funds

	Massachusetts	New Jersey	New York	Pennsylvania
Superannuation Retirement				
Qualifications .	Optional at age 60, with 15 years service, or after 35 years service, irrespective of age. Compulsory at 70.	Optional at age 60.	Optional at age 60. To be compulsory at age 70 after 1936, being gradually decreased from age 80 in 1926.	Optional at age 60.
Benefits				
From Employees' Payments	Annuity equal to actuarial equivalent of accumulated contributions.	Same as Mass.	Same as Mass.[a]	Same as Mass.[a]
From State Contributions........	Pension equalling annuity provided by employee plus additional pension for prior service, computed as if both state and employee had been contributing for years of service before passage of act. Minimum $300. Maximum is 50 per cent of average annual salary for last five years. Payable monthly.	Pension equal to 1/140 of average annual salary for last 5 years times years of total service, plus same fraction of average for each year of prior service. Payable monthly.	Same as for New Jersey except number of years for which credit is given is limited to 35. Payable monthly.	Pension equal to 1/160 (or 1/100 depending on employee's contributions) of average annual salary for last five years times years of total service, plus same fraction of average for each year of prior service. Payable monthly.

[a] After 20 years of service in New York and 10 years in Pennsylvania, an employee may receive a discontinued service pension, if he did not withdraw voluntarily, which is based on the contributions made by both himself and the state.

TABLE XXXVI—(*Continued*)

	Massachusetts	New Jersey	New York	Pennsylvania
Disability Retirement				
Ordinary				
Qualifications	15 years' service.	10 years' service.	15 years' service.	5 years' service.
Benefits	Not more than 50 per cent of average annual salary for last ten years. Minimum $300.	Annuity equal to actuarial equivalent of accumulated contributions plus pension of 1/5 of average annual salary for last 5 years (maximum is 80 per cent of pension receivable upon retirement at 60 on basis of 1/140 of average times years of service) plus additional pension of 1/140 of average annual salary for last 5 years times years of prior service	Annuity equal to actuarial equivalent of accumulated contributions plus pension to produce allowance of 90 per cent of 1/70 of average annual salary for last 5 years times years of service Minimum 25 per cent and maximum 90 per cent of pension payable for retirement at 60.	Annuity equal to actuarial equivalent of accumulated contributions plus pension to produce allowance of 1/90 of average annual salary for last 5 years times years of service. Minimum 30 per cent of such average. Maximum 8/9 of what pension would have been at retirement for age.
Accident [b]				
Benefits	Actuarial equivalent of accumulated contributions plus pension to equal 1/2 of salary at time disabled.	Actuarial equivalent of accumulated contributions plus additional pension of 2/3 of average annual salary for last 5 years.	Actuarial equivalent of accumulated contributions plus additional pension of 3/4 of average annual salary for last 5 years	No provision

[b] If disability results from accident suffered in performance of duty, these benefits are paid in lieu of workmen's compensation.

TABLE XXXVI—(*Continued*)

	Massachusetts	New Jersey	New York	Pennsylvania
Payments in Case of Death				
Ordinary.	Accumulated contributions.	Accumulated contributions.	Accumulated contributions plus additional amount not to exceed 1/2 last annual salary.	Accumulated contributions.
Accident [c].	Pension to widow while remaining unmarried, or to children while under 16, for same amount as would be payable to injured employee for accident disability.	Accumulated contributions of employee plus pension to widow while remaining unmarried, or to children while under 18 of 1/2 average annual salary for last 5 years. If no widow or children, lump sum payment to estate for one year's average salary.	Accumulated contributions of employee plus pension to widow while remaining unmarried, or to children while under 18, or to dependent father or mother, of 1/2 average annual salary for last five years.	Accumulated contributions.
Withdrawal Privileges	Accumulated contributions.	Accumulated contributions.	Accumulated contributions.[a]	Accumulated contributions or annuity for actuarial equivalent of same.[a]

[c] If death occurs as the result of an accident sustained in performance of duty, special provision for protection of the employee's family is made in the states of Massachusetts, New Jersey and New York.

age of retirement an annuity equal to 1/140 of the average annual salary (for the last five years) for each year of service. The plan is similar in Pennsylvania except that the employee may contribute a percentage of salary which will provide an annuity of either 1/160 or 1/100 of his average annual salary (for the last five years) for each year of service. In either case, he may limit his payments to 5 per cent of his salary.

All expenses of administration are borne by the state, or, in New Jersey and New York, by the state and its political subdivisions Annual appropriations for "normal" and "deficiency" contributions to meet accrued and accruing liabilities are made in all states but Massachusetts The latter pays its portion of pension payments only when incurred.

Financial Status

In 1926, the funds of Massachusetts, New Jersey and New York covered 31,000 employees, received in members' contributions, state appropriations and interest approximately $5,000,000, paid out for pensions, refunds and expenses nearly $1,400,000; and had assets on hand exceeding $14,000,000. Date for Pennsylvania were unavailable.

Accrued liabilities for the three funds—New Jersey, New York and Pennsylvania—which are making an effort to finance their obligations scientifically, aggregated about $37,000,000 in 1926, but assuming the soundness of the methods for amortizing these, they should be wiped out within the next twenty-five years

Investments

Investments legal for sinking funds of the state in Massachusetts and New York, for savings institutions in New Jersey and for fiduciaries in Pennsylvania are prescribed for the retirement systems of those states.

Administration

The State Comptroller administers the New York fund. All others are in charge of specially created boards [16] on which con-

[16] The various boards are made up in the following manner
Massachusetts—Retirement Board—3 members—State Treasurer, employee elected by members and a third selected by the other two.

tributors are represented. Except in New York, where the division of finance of the department of taxation and finance is given custody of assets, the custodian of funds is the state treasurer. All are subject to supervision by the state insurance department, and all, other than that of Massachusetts, are required by law to have actuarial examinations made periodically.

State Liability for Solvency

The funds of New Jersey, New York and Pennsylvania contain guaranty clauses similar to that cited for the Pennsylvania school employees' retirement system.

In General

Inasmuch as these funds differ little in their provisions, and not at all in their principles of operation, from those covering teachers, needless repetition of discussion has been avoided. Conclusions respecting teachers' actuarial funds are equally applicable.

New Jersey—Board of Trustees—5 members—State Treasurer, two appointed by the Governor and two elected by members.

Pennsylvania—Retirement Board—5 members—Secretary of Commonwealth, State treasurer, one appointed by the Governor and two elected by members.

CHAPTER XI

HAIL INSURANCE FUNDS[1]

Early History

The devastation to growing crops wrought by sweeping hail storms led to agitation in North Dakota for a state hail insurance fund to assume the risk. This was established in 1911. A rate of 20 cents (raised to 30 cents in 1913) was charged for $8 of insurance per acre regardless of location or susceptibility of different crops to hail damage. As application for insurance had to be made in the early spring and the premium paid at that time, little was sold in spite of the very low rate. The rate was so woefully inadequate that incurred losses exceeded premium receipts every year until 1919. Deficits were not cumulative, however, for claims were scaled down and paid pro rata. The proportions paid were: 70 per cent in 1911, 55 per cent in 1912, 88 per cent in 1913, 65 per cent in 1914, 75 per cent in 1915, 38 per cent in 1916, 62 per cent in 1917, and 53 per cent in 1918. Operations under this law were so unsatisfactory that a new one, providing for automatic or compulsory insurance, was enacted which became effective in 1919

In spite of North Dakota's failure, Montana's 15th Legislative Assembly created a hail insurance fund which began operations in 1917. It wrote coverage of $12 per acre on

[1] The information on hail insurance funds and their practices contained in this chapter was obtained largely from personal interviews with the following representatives of various funds·
North Dakota—S. A. Olsness, Commissioner of Insurance and Martin S. Hagen, Manager, State Hail Insurance Department, Bismarck.
Montana—Mrs Anna I. Seiler, State Board of Hail Insurance, Helena.
Nebraska—John R. Dumont, Insurance Commissioner, Lincoln
This was supplemented by annual reports and miscellaneous material as well as correspondence with the same officials and also with G. H. Helgerson, South Dakota Commissioner of Insurance, E. K Bowman, Chairman of the Montana State Board of Hail Insurance and F. E Young, Assistant Insurance Commissioner of Oklahoma. To all of these the author acknowledges his indebtedness

grain and $5 per acre on hay, the maximum levy permitted by law being 60 cents per acre for the former and 25 cents for the latter. The state was not zoned, all policyholders being charged the same rate. Climatic conditions were favorable in 1917 so the actual assessment on grain was only 40 cents per acre although the full levy on hay was collected. All losses were paid in full. As a result of this showing the number of acres of grain insured by the fund almost trebled during the succeeding year, but losses were very heavy so the maximum possible levy was collected and only 46 per cent of the losses paid, each claim being pro-rated. The year 1918 marked the peak of that fund's operations as the income of $404,976 received in assessments was far in excess of that taken in for any subsequent period.

The Nebraska legislature enacted in 1917 a measure authorizing a hail insurance fund which began writing business in 1918. All first year losses were paid in full and a small surplus created. The law was materially modified during the early months of 1919.

Trend Since 1919

As the year 1919 marks a radical revision of the then existing hail insurance fund laws and the passage of two more (in Oklahoma and South Dakota); attention hereafter will be confined to the activities of the funds subsequent thereto. The year 1919 is likewise the first in which the funds loomed up large as respects the proportion of all hail insurance business written, their combined premium income being ten times greater than in 1918 and fifty times greater than in 1917. An idea of their relative size that year compared to private companies and of the changes which have subsequently come about in their importance may best be obtained from Table XXXVII which sets forth the premium receipts on hail business of all stock and mutual companies in the country as well as of the funds.

TABLE XXXVII

PREMIUM RECEIPTS—HAIL INSURANCE

(000's omitted)

Year	Stock and Mutual Companies[a]	State Funds[b]	Total	State Fund Per cent of Total
1919	$24,235	$5,859	$30,094	19.4%
1920	19,588	5,864	25,452	23.2
1921	15,646	7,306	22,952	31.8
1922	12,693	6,278	18,971	33.1
1923	13,812	5,547	19,359	28.7
1924	10,411	4,545	14,956	30.4
1925	16,404	2,688	19,092	14.1
1926	15,750	3,012	18,762	16.2

a Data supplied by National Underwriter
b State fund figures include flat acreage tax in North Dakota.

TYPES OF FUNDS

Automatic

All cropped land is automatically covered in North Dakota and South Dakota unless specifically exempted. Every spring the county assessors in these two states procure from each farmer a sworn statement of acreage, crops under cultivation, location and ownership. Copies of these reports are filed with the county auditors, who in making up their abstracts, insure all crops not legally exempted. To be effective, exemption must be claimed before June 1st in South Dakota and June 14th in North Dakota. Otherwise the hail assessment is charged up to the owner or tenant in the same manner as other taxes. This automatic feature accounted for the very large amount of insurance written by these funds in their earlier years but it is interesting to note that as time goes on, there is a tendency for the farmers to exercise their rights of withdrawal.[2] Table XXXVIII evidences the trend of the hail business in these two states.

[2] The proportion of total crops insured by the North Dakota fund for each year since coverage was made automatic are: 67 per cent in 1919, 63 per cent in 1920, 61 per cent in 1921, 49 per cent in 1922, 42 per cent in 1923, 30 per cent in 1924, 33 per cent in 1925, and 31 per cent in 1926.

TABLE XXXVIII

HAIL INSURANCE PREMIUM RECEIPTS

North Dakota and South Dakota

Year	North Dakota		South Dakota		Total
	State Fund[a]	Private Companies[b]	State Fund	Private Companies[b]	
1919	$5,858,693	$ [c]	$1,056,462	$ [c]	$. .
1920. .	5,864,133	1,716,705	1,092,410	290,225	8,963,473
1921	7,305,941	1,075,937	984,154	239,236	9,605,268
1922 .	6,277,671	844,032	1,202,995	277,510	8,602,208
1923 . .	5,447,101	385,803	1,126,204	291,905	7,251,013
1924 .	4,545,071	498,538	2,300,325[d]	293,612	7,637,546
1925 . .	2,687,586	848,132	644,779	1,282,910	5,463,407
1926 .	3,012,477	389,758	617,980	371,391	4,391,606

a Flat acreage tax included

b Private company data secured through courtesy of Spectator Company

c Figures unavailable.

d Includes an extra levy of 100 per cent.

The downward trend in total income is undoubtedly due in part to a deflation of farm values and a more widespread knowledge on the part of farmers as to the manner by which they can obtain exemption, but the scaling down of 1923 losses in North Dakota and the levying in 1924 of an extra assessment on South Dakota policyholders have certainly brought about a decline in the business of the funds and an increase in that of private companies.

Optional

Farmers in Montana and Nebraska may obtain state coverage against hail by applying to their county assessors. When thus covered in Montana, the hail levy is included with other taxes against the land and collected in the same manner. Nebraska requires the premium for hail insurance to be paid in cash or by bank order. The Oklahoma fund was also of the optional type, but as its business was negligible (the total premium receipts for the five years of existence amounting only to $2,086 05) the law authorizing it was repealed in 1925. Optional funds wrote a substantial volume of business in their

early years but have rapidly decreased in size and relative importance. Table XXXIX demonstrates this trend.

TABLE XXXIX

HAIL INSURANCE PREMIUM RECEIPTS

Montana and Nebraska

Year	Montana		Nebraska		Total
	State Fund	Private Companies	State Fund	Private Companies	
1919	$ 58,789	$ 293,055[a]	$782,714	$3,520,808	$4,655,366
1920	299,731	1,979,311	615,937	2,789,221	5,684,200
1921	140,682	847,436	138,091	2,143,172	3,269,381
1922	137,144	692,581	146,881	1,511,047	2,487,653
1923	109,470	574,679	82,761	1,877,276	2,644,186
1924	74,167	562,100	73,586	1,317,389	2,027,242
1925	75,637	702,585	28,656	2,137,988	2,944,866
1926	82,314	542,028	27,004	1,512,405	2,163,751

a Hail and tornado business combined in 1919

Although the agricultural slump has manifested itself very decidedly in the hail business of the optional fund states, nevertheless, the inclination of farmers to abandon state protection has not been due entirely to this since the business of private carriers has held its own quite well As will be explained more at length later, the primary cause is lack of confidence. It is interesting to note that the Montana fund has endeavored to curb the wane of its business by advocating the incorporation of an automatic feature in its legislation.[3]

ADMINISTRATION

The hail funds of North Dakota, South Dakota and Nebraska come under the jurisdiction of the insurance commissioners of those states, although the first named has its own manager. A state board of five members, consisting of the State Treasurer, Commissioner of Agriculture, Labor and Industry and three others appointed by the Governor (one of whom is designated as chairman) administers the law in Montana. As previously noted, county assessors list the lands

[3] See Senate Bill 55, introduced in the 19th Legislative Assembly and defeated.

which are to be covered, unless exempted, in the automatic fund states and solicit business in the others. Premiums or assessments are also collected and remitted by county officials to the state.

Coverage and Cost

Hail insurance, as written by private carriers, may ordinarily be obtained on grain, fruit or vegetables, although grain is the crop principally covered. As the relative frequency and severity of hailstorms in different states and different sections of the same state may vary quite widely, each state is generally zoned for rating purposes and counties with like hazards grouped together. Basic rates on grain are then set up for each zone to which a surcharge may be added for such grains as barley and rye or for fruit and vegetable crops. The maximum coverage which will be written on grain is usually limited to a certain amount per acre, as $24 on non-irrigated and $36 on irrigated land, with higher limits on fruit and vegetable crops. Premiums are customarily paid in cash, bank certificates of deposit or notes, guaranteed by agents, maturing soon after the crop harvesting season. With this background of private company practice in mind, we may proceed to a more detailed review of state fund operation.

Coverage

The North Dakota act stipulates that it shall cover "all crops grown on cultivated lands listed as actually cropped" but in practice the protection has been confined principally to wheat, rye, barley, oats, speltz, flax and corn. In the 1926 report of this fund, its manager recommends the act be amended to include only those crops above named. Unless exempted, each acre of tillable land is insured for $7 but an additional $3 of protection is obtainable upon application.

Crops in South Dakota, specifically enumerated in the law as comprising "wheat, oats, barley, rye, flax, speltz, corn, cane, alfalfa, proso, millet, buckwheat and sorghum," are automatically covered for $10 per acre unless application is made for their exemption.

Insurance in Montana may be secured up to \$10 per acre (\$12 until 1923) on grain and \$5 per acre on hay crops. Grain crops are defined as comprising " wheat, oats, flax, barley, rye, buckwheat, corn, speltz, timothy, clover, alfalfa, peas and beans " The rate for all grain is the same but there is a different charge for hay.

Growing grain is insurable by the Nebraska fund up to \$10 or \$15 per acre. Potatoes, alfalfa, sugar beets and vegetables are definitely excluded from coverage and the rate on barley and rye is 2 per cent higher than for other grains.

Zoning

Until 1925 North Dakota had no zoning system, but in that year the law was revised and now provides for four groups or districts. The district to which any county is assigned will depend upon its loss ratio for the current year, the grouping stipulated in the law being as follows:

District No 1—Under 3 per cent
District No 2—Over 3 per cent but under 5 per cent
District No 3—Over 5 per cent but under 7 per cent
District No 4—Over 7 per cent

Utilization of the loss ratio for the current year in governing assignment to zones is possible only because of the assessment plan which will be described later. The South Dakota law divided counties into four zones until 1925. When rates were radically raised in that year, five districts were established A uniform rate was charged in Montana until 1921 irrespective of location. At that time, three zones were created but this number has subsequently been increased to five. Counties in Nebraska are now divided by the fund into six districts although prior to 1922 there were only three.

Rates and Rate Making

The North Dakota and Montana funds operate on the assessment plan. After hail losses and expenses of operation, other than rent for quarters supplied by the state, have been ascertained, a levy—not to exceed a maximum specified by law

—is made upon subscribers. This maximum in North Dakota for the period between the 1919 and 1925 law revisions was 50 cents per acre for the $7 automatic coverage If the additional $3 coverage, available from 1921 to 1925, was taken, 21 cents per acre was added to this charge. When the zoning system was adopted in 1925, the maximum levy was placed at 10 per cent but rates for the four different districts were required to bear a relationship to each other of 5, 6, 7 and 8. This section of the law has been interpreted to mean that the hail indemnity tax may exceed 10 per cent in certain districts so long as the aggregate levy for the entire state does not exceed 10 per cent of the amount at risk. A charge proportionate to the automatic coverage rate is added if the extra $3 protection is desired However, less than 3 per cent of the total acreage insured by the fund was covered for the higher limit in 1926 No allowance in the levy is made for establishing a reserve fund but a flat tax of one cent per acre (three cents from 1919 to 1922 inclusive) is laid upon all tillable land in the state, whether or not insured, from the proceeds of which a permanent surplus, not to exceed $4,000,000, is being built up. This is to be used as a revolving fund to pay losses more promptly, necessitated by the practice of having the hail levy collected with other taxes which means the department may not receive its assessments until several months after the hail season is over and the amount of its losses determined.[4] It is not available to meet excess losses. In fact, a special act had to be passed by the legislature in 1925 to permit payment from this surplus of a $900,000 deficit incurred in 1923.

Montana's maximum levy was 10 per cent in 1919 and 1920 but when the zoning plan was framed in 1921, the maximum for each district was placed at $.85, $1 08 and $1 20 for $12 coverage on grain and $ 35, $ 45 and $.50 for $5 on hay. In 1923, the coverage on grain was reduced to $10 per acre and

[4] Losses are definitely ascertained in October, but taxes do not become due until December 1st and are not delinquent until the first of the following March. In the first few years of activities, losses were paid with registered, interest-bearing state warrants which would be redeemed from the hail levy when received, so this means was adopted to build up a fund from which losses could be paid as soon as adjusted

the maximum levy set at $.50 for the lowest zone and $1 for the highest with proportionate rates for the $5 per acre hay coverage. Maximum rates in the five different zones at the present time are $ 50, $ 70, $ 80, $ 90 and $1 00 for $10 insurance on grain and one-half such amounts for insurance on hay. The following provision for a reserve account is abstracted from the law

"Whenever the losses together with the expenses and costs of administration in any one year shall amount to a less amount than the sum of seventy cents per acre for every acre of grain insured and a proportionate amount on hay crops, the State Board of Hail Insurance may levy such amount as they may consider proper and just for the purpose of providing a reserve fund, providing, however, that such levy when added to the amount necessary to pay costs of administration, interest and losses for the current year shall not exceed the sum of seventy cents per acre on lands sown to grain crops and a proportionate amount on hay crops and provided further that in any one year there shall not be added to the reserve fund an amount greater than the sum of five per cent of the total risk for that particular year and provided further, that the amount of said reserve fund shall not exceed the sum of one million dollars"

Rates for South Dakota and Nebraska risks are fixed by those funds prior to the hail season If not adequate, the South Dakota fund collects an extra levy and the Nebraska fund scales down the claims The schedule of levies in South Dakota for $10 coverage was $ 35, $ 40, $ 42 and $.45 respectively in the four different zones until 1925 when five districts were created and the rates changed to $ 25, $ 35, $ 45, $ 60 and $ 75 for the same amount Losses and expenses (other than rent for quarters) are to be paid from receipts and the balance, if any, transferred to a reserve fund until it equals or exceeds $2,500,000.

Nebraska rates for $10 of insurance per acre were $ 25, $.40 and $ 60 for its three zones in 1920 and 1921 but they have passed through various stages of upward revision until the rates for the present six districts are $ 30, $.40, $.50, $ 60, $.70 and $ 90 for $10 of insurance and a proportionate amount for $15. Counties may be redistricted from time to time as their individual experience warrants.

Expenses

Loss payments consume the greater part of the levies received by all funds, but operating expenses are paid first. The expense ratios for the various funds in 1926 were:

North Dakota	6 4	(Based on levy exclusive of flat tax)
South Dakota	4.8	(Based on actual levy)
Montana	10 3	(Based on actual levy)
Nebraska	11 8	(Based on actual levy)

These ratios do not reflect, however, the entire cost of administration, as office room and incidental services of various state officials are supplied to all funds free of charge. By utilizing county assessors for purposes of solicitation and county tax machinery for the collection of levies, funds are enabled to have these functions performed without cost to policyholders in South Dakota and Montana and at only a nominal charge in Nebraska and North Dakota.[5] All funds are wholly tax-exempt.

Adequacy of Rates

Were it not for a limitation upon maximum levies, an assessable plan would probably always produce adequate rates. This has been the situation of the North Dakota fund since 1919 except for the year 1923 when the maximum sufficed to pay but 80 per cent of each claim. As heretofore noted, it was necessary to have a special act passed by the legislature to permit of drawing $900,000 from the surplus created by the flat acreage tax in order to pay off the remaining 20 per cent of these claims. They were finally settled in 1925. Losses have been paid in full every year by the South Dakota fund though an extra levy of 100 per cent was necessary in 1924 to do so. The Montana fund was unable to meet its 1923 losses and expenses from maximum assessments plus previous sur-

[5] In Nebraska, the insured pays a fee of $1 to the assessor or county clerk at the time the application is taken. This is not included in receipts or disbursements of the fund so is not reflected in the expense ratio given above The North Dakota fund pays assessors $15 per township and counties 50 cents for every 1000 acres of tillable land in the county listed, plus $1 for every 1000 acres actually insured for the automatic coverage. The state auditor's and state treasurer's offices are each paid $1,000 a year for their extra work.

plus so but 68 per cent of each claim was paid Rates of the Nebraska fund have been almost consistently inadequate to meet current losses, and claims were scaled down proportionately in 1920, 1922, 1923 and 1924, only 50 per cent being paid in the last year mentioned.

Average costs of insurance vary quite widely from year to year, as will be noted from Table XL which presents the average actual cost each year in the three states for which data are available on the basis of $10 per acre of coverage.

TABLE XL

AVERAGE COSTS OF HAIL INSURANCE ON BASIS OF $10 PER ACRE

Year	North Dakota	South Dakota	Montana
1919 .	$ 45	$ 12	$ 60
1920 .	.45	31	.80
1921 ..	63	.49	.90
1922. . .	60	45	.70
1923.. .	71[a]	.57	88[b]
1924 .	.47	73	.83
1925 ..	.43	.43	.66
1926	.53	.43	.69

a Cost for paying 80 per cent of losses.
b Cost for paying 68 per cent of losses

Although the foregoing costs may be influenced somewhat by a re-distribution from time to time of the number of acres insured in different sections of the state, nevertheless, they emphasize (1) the uncertainty of cost to the policyholder in a fund exercising the assessment privilege, (2) the importance of specifying a maximum levy or of charging a fixed premium which will be high enough to permit of paying all claims in full, and (3) the necessity of building up a substantial reserve or surplus to iron out the wide fluctuations in cost from year to year.

North Dakota did increase the maximum levy provision of its law in 1925 to a point which will probably suffice to take care of all losses except in an unusually disastrous season, but Montana's maximum, which is the same as in 1923, does not appear to be high enough to prevent a repetition of that year's

experience South Dakota rates are materially higher now than in the year of its extra levy but whether adequate to meet another season like that of 1924 will depend entirely upon how long that is deferred Certainly, the present reserve could not go far towards assisting. In spite of successive rate increases, the Nebraska fund has not yet demonstrated that premiums will suffice to pay all losses.

Equity of Rates

Unquestionably the rates of some funds have in the past not been equitable between different classes of policyholders as is indicated by the agitation for adoption of zoning systems [6] and for subsequent re-districting. Our concern, however, is with the present schedules

Hail losses in a particular section vary quite widely from year to year, so the only method of determining the exact degree of equity in the present scale of any state's rates is to apply it to the amount of insurance in force in each county for a number of years preceding and then compare the premiums thus produced with actual losses incurred This is a somewhat tedious process and involves the use of data not readily obtainable Furthermore, in at least two states—Montana and Nebraska—the exposure would be too small to warrant any conclusion Surface indications of inequity are sufficiently numerous and weighty however, in the Dakotas, to obviate the necessity of a detailed study.

For six years during which the South Dakota fund operated under its old rates, Day County sustained the largest amount of

[6] In discussing his change of views with respect to the zoning system which he had formerly opposed, S. A Olsness, Commissioner of Insurance in North Dakota, stated in the 1923 Annual Report of the North Dakota Hail Insurance Department:

"Such a readjustment may not be looked upon favorably by the people who have enjoyed the advantage of the discriminatory rates in the past, but unless the abuse is corrected the sections with low loss ratio will withdraw their patronage from the Fund, thus leaving the territory with high loss experience to bear their own burden in the long run, anyway Unless we would drive the Red River Valley district and other parts with low loss ratio away from the State Fund and into the fold of the private companies, who undersold us in said districts last summer, we must adopt one of the proposed amendments or something better."

losses whereas Edmunds ranked third and Sully fourth. Their annual premium receipts and losses are shown in the following table:

TABLE XLI

EVIDENCES OF RATING FAVORITISM

South Dakota

Year	Day County		Edmunds County		Sully County	
	Premiums	Losses	Premiums	Losses	Premiums	Losses
1919....	$ 31,030	$ 1,002	$ 20,573	$ 24,206	$ 12,144	$ 4,030
1920.. .	36,925	108,366	32,341	64,336	15,399	17,619
1921 ..	46,265	71,111	34,675	78,747	13,876	89,430
1922.	71,919	333,528	45,835	22,883	23,838	8,605
1923 ..	75,429	331,454	41,756	64,543	24,561	67,536
1924....	151,924	198,562	83,830	200,275	74,356	156,430
Total	$413,492	$1,044,023	$259,010	$454,990	$164,174	$343,650

During that six year period, these three counties, with losses averaging approximately 24 per cent of all those paid by the fund and premiums averaging less than 11 per cent of the fund's total receipts, were assigned to the lowest cost district and paid a rate of only 35 cents per acre When the 1925 revision took place, Day County was placed in the fourth district bearing a rate of 60 cents and the other two in the third district with a rate of 45 cents Obviously, if 35 cents per acre developed a premium equal to less than 40 per cent of the losses (disregarding administrative expense) in Day County, less than 57 per cent in Edmunds County and less than 48 per cent in Sully County over a six year period, it is hard to see how a 60 cent rate can be justified for the first or a 45 cent rate for the other two. One might well inquire why all three counties were not placed in the highest cost district and charged 75 cents per acre

To portray the other side of this picture, premiums and losses for three counties, also among the leading ones covered by the fund, are set forth in Table XLII.

TABLE XLII

EVIDENCES OF RATING INJUSTICE

South Dakota

Year	Brookings County		Kingsbury County		Spink County	
	Premiums	Losses	Premiums	Losses	Premiums	Losses
1919	$ 33,857	$ 892	$ 45,661	$ 6,650	$ 84,252	$ 5,700
1920	32,053	10,904	33,082	3,192	62,719	23,181
1921	25,190	1,769	27,971	12,978	51,592	28,048
1922	24,204	7,525	25,703	34,281	51,698	5,457
1923	19,749	19,427	26,014	10,544	39,409	46,013
1924	40,784	11,754	50,744	1,964	81,291	10,226
Total	$175,837	$52,271	$209,175	$69,609	$370,961	$118,625

For the first six years of the fund's activities, these three counties, paying 9.7 per cent of the fund's premium receipts and receiving but 3 1 per cent of the fund's loss payments were assigned to the same district and paid the same rate as the first three mentioned. Under the 1925 revision, they were assigned to the second district which bears the same rate as they paid before. The injustice is so patent as to require no elaboration.

The North Dakota plan of re-districting counties every year on the basis of the ratio between actual losses and the amount at risk may work an injustice upon subscribers in counties where the fund has a very small exposure and the experience on it is bad, even though the hail record for the county as a whole may have been splendid. Moreover, a comparison of the loss ratios upon which districting is based with the relative ratios between rates as previously given, demonstrates that the rates for each district are not properly proportioned If further proof is desired of the inequities produced by the rate relationship fixed by law, it is found in the average cost of $100 protection[7] in each county for the eight years ending 1926. A frequency table summarizing these figures follows:

[7] See Table on page 40, 1926 Annual Report of the North Dakota Hail Insurance Department.

Cost per $100	Number of Counties
Under $2	3
$2.01– 4.00	21
4.01– 6.00	13
6.01– 8.00	9
8.01–10.00	5
Over $10	2
	53

A discussion of the inequities of North Dakota's rating system would not be complete without an allusion to the flat acreage tax, upon all tillable land in the state, which is used to provide a surplus for the state hail fund. This is no small item as the annual revenue produced ranged between $818,000 and $855,000 for the years when the three cent tax was in effect and is approximately $270,000 under the one cent rate. A surplus in a hail insurance fund is a splendid thing and the need for it is apparent but the justice of assessing all tillable land whether or not insured, in order to raise it, is hard to see.

Payment of Claims

It is of interest to know how much of an agreed loss a policyholder will be able to collect. That we have already examined. But it is also worthwhile to note what arrangements are made for adjusting losses and how soon they will be paid.

The North Dakota fund has 134 part-time adjusters (from 1 to 5 in each county) who adjust losses when called upon. They are paid $6 a day for time employed and 10 cents a mile for travelling expenses. Six inspectors, receiving $185 per month for three months, supervise adjustments. An effort is made to route adjusters so they will not be handling losses too close to their own communities. Claim payments can not be started until all losses are adjusted and the levy determined since it is deducted from the face of the claim. Owing to the specially created surplus, the fund need not wait, however, for receipt of its assessments before settling claims but ordinarily every subscriber has received payment before February.

The South Dakota fund's adjusting system is similar to that just described. Payment of losses is begun the middle of

October This has made it necessary to borrow funds in anticipation of tax payments which do not come due until the following spring. Generally speaking, such money is obtained from sinking funds provided for bonds issued by some other state department. The hail fund pays interest on its borrowings.

Losses of the Montana fund are handled by two regular adjusters employed for 2½ months and 25 men who are subject to call if necessary and work on a per diem basis If money is available, 50 per cent of the loss, minus assessments against the policyholder, is paid 40 days after the loss is sustained and the balance at the expiration of the hail season. If the fund has no money and is unable to borrow it from the State Land Board or the banks, registered warrants are issued which draw interest until paid.

The Nebraska fund has two experienced adjusters. They handle losses in all parts of the state for which they are paid a per diem fee of $10 and allowed a like amount for expenses. At one time this fund had adjusters in every county subject to call but this practice was abandoned because of possible collusion with claimants. Claim checks are sent out December 1st, thus allowing time for adjustment of all losses and determination of the proportion which premium receipts will warrant paying.

Financial Stability

To determine at any given time the financial solvency of a state fund writing hail insurance is a relatively simple task. Only hail losses incurred during a stipulated growing season are covered By the end of a calendar year, these are all adjusted and the exact liability known If maximum assessments or regular premiums are adequate, claims are paid in full; otherwise, they are pro-rated or an extra levy made. Any cash balance left in the fund plus hail assessments not received but collectible, less any borrowed money or accrued liabilities, may be regarded as a surplus (technically, the assessment premium plan and the pro-rated loss plan make a deficit im-

possible) which is a factor of safety for future years This is the only source from which unusual losses, not paid from current assessments, may be met as none of the funds carries reinsurance and the respective states assume no responsibility for their solvency.

On January 31, 1927, the North Dakota fund showed a surplus of $3,721,748[8] but $2,499,470 of this represented uncollected taxes; $29,078 being still due from the 1919 levy, $17,874 from 1920, $117,263 from 1921, $90,146 from 1922, $65,967 from 1923, $48,898 from 1924, $243,600 from 1925 and the remainder from the 1926 levy. As hail tax liens are subordinate to mortgage liens, a substantial proportion of these is probably uncollectible.[9] The South Dakota fund's balance sheet showed assets on December 1, 1926 of $7,501 in cash and $768,381 in uncollected taxes (of this amount $269,434 were for 1925 or prior years) against which were liabilities in the form of borrowed funds aggregating $550,000 Reliance upon the difference ($225,882) as a surplus could hardly be warranted in light of the assets which give rise to it. The Montana legislature enacted in 1922 a law making assessments a lien upon crops as well as land.[10] The problem of delinquent tax levies is still existent, however. At the end of 1926, such

[8] This is the surplus created by the flat acreage tax though it is interesting to note that particular tax yielded $4,426,753 during the eight years ending 1926

[9] Under the heading "Greatest Problem for Solution," the 1926 report of the North Dakota Hail Insurance Department contained the subjoined statement. "The greatest difficulty confronting the Department, and the most discouraging feature of the State Hail Insurance business is still with us, namely, that mortgage liens are still superior to Hail Indemnity Tax liens, and that, therefore, the Hail Indemnity Tax is not on an equal basis with general taxes Mortgagees naturally take advantage of this situation, irrespective of the fact that the Department has furnished the protection, and pay the general taxes without paying the Hail Indemnity Tax. If the legislature desired to do so, it could easily provide safeguards and penalties that would alleviate the situation greatly, though not entirely overcome it."

[10] In a letter to the Governor of Montana, dated January 11, 1927, the Chairman of the State Board of Hail Insurance stated:

"During 1920, '21, and '22 delinquent accounts for more than $150,000 were built up During these years the accounts were secured by a land lien only. In 1923 the crop lien was put into effect, this has deprived very few farmers of getting insurance because of the non-ownership of the land or previous crop liens It has been a large factor in helping to pay the registered warrants against the fund which four years ago amounted to nearly $140,000"

accounts approximated $120,000 but for the first time in its history the fund had a cash balance of roughly $39,000. The balance in the Nebraska fund at the close of 1926 was $14,844.

If the total flat acreage tax collected by the North Dakota fund since 1919 be excluded from its surplus and adequate allowance made for uncollectible levies of all funds, the underwriting operations of the past eight years taken as a whole would not only fail to indicate a surplus, but on the contrary, a substantial deficit would be evident

In General

Hail insurance loss ratios are subject to very wide fluctuations. During the past five years, the average loss ratio for all stock, mutual and reinsurance companies in the United States has ranged between 51 2 per cent and 87.3 per cent [11] on their hail business An even wider fluctuation may be expected when the distribution of risk is confined to a smaller territory. This is clearly demonstrated by Table XLIII, presenting

TABLE XLIII

Hail Insurance

Comparative Loss Ratios

Year	Combined Business of Private Companies				State Funds	
	North Dakota	South Dakota	Montana	Nebraska	South Dakota	Nebraska
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
1919	a	a	59b	57	32	88
1920	61	51	56	58	90	123
1921	81	89	83	44	128	28
1922	55	133	64	122	105	166
1923	91	90	120	81	145	129
1924	87	125	52	89	98c	187
1925	40	82	32	66	89	90
1926	41	60	29	52	67	53

a Data not available.
b Hail and tornado combined in 1919
c Extra levy of 100 per cent included in premiums upon which ratio was based. If excluded, loss ratio would be twice as large.

[11] Based on figures published by The National Underwriter. The ratio was 76 2 per cent in 1922, 87 3 per cent in 1923, 84 7 per cent in 1924, 67 2 per cent in 1925 and 51.2 per cent in 1926

for each year since 1919 the loss ratios on the combined hail business of all private carriers writing this form of coverage in each of the states having funds, with which are compared the loss ratios for the two funds levying definite premiums Obviously, North Dakota and Montana loss ratios would have no significance since assessments are governed by the losses sustained. The existence of wide loss fluctuations in these jurisdictions is borne out, nevertheless, by figures previously quoted as to average costs per acre

Even if all insurable land in any of the states under consideration were covered by a single carrier, a stable loss ratio could not be expected Extension of the protection over a much larger territory with judicious selection of risks would tend toward stability Multiple line underwriting, where gains in one field of insurance offset losses in another, would exert a similar influence But neither of these practices, recognized as sound and adopted by private insurance companies, can be pursued by the funds Their only other resort is to formulate a scale of rates sufficiently high to build up a huge surplus which will permit of meeting the excess losses of bad seasons with the excess premiums of good ones. This has certainly not been done and it is questionable whether it ever can be under any system giving farmers a right of withdrawal since their desire to secure protection at cost makes them antagonistic to the creation of a large surplus from their premiums. Paradoxical as it may seem, success from the standpoint of volume of business with the attendant diffusion of risk appears to be obtainable for a state fund only through weakening its financial structure by inadequate premiums and delay in their collection.

CHAPTER XII

BANK AND PUBLIC DEPOSITS GUARANTY FUNDS [1]

A desire to protect the public against loss occasioned by a bank's insolvency early led to agitation for the creation of state funds to assume this risk Mention has already been made of the New York Safety Fund System instituted in 1829 Its intention was to create a fund by assessments for the payment of the debts of insolvent banks, the framers having in mind particularly losses arising from note issues rather than from deposit banking. Owing to heavy drains entailed by the panic of 1837, the fund became insolvent and the law creating it was repealed Vermont's fund established in 1831 was also unsuc-

[1] In the course of acquiring information respecting the operation of bank and public deposits guaranty funds, the author visited the state capitals of Kansas, Nebraska, North Dakota, Washington, Iowa and Wisconsin. Information received in personal interviews with various state officials has been supplemented by correspondence, annual reports and miscellaneous material of various kinds Particular acknowledgment is made to Roy L Bone, Bank Commissioner of Kansas; Van E Peterson, Secretary of Nebraska Guarantee Fund Commission, F W Cathro, Inspector of North Dakota Depositors Guaranty Fund Commission; H H Hansen, Washington Deputy Supervisor of Banking; R E Johnson, State Treasurer and G E Thomas, Deputy Treasurer, of Iowa; and Solomon Levitan, State Treasurer of Wisconsin

The author is indebted to the following officials, in states not personally visited, for supplying necessary data: J S Love, Mississippi Superintendent of Banks, O B Mothersead, Oklahoma State Bank Commissioner, Charles O Austin and James Shaw, Texas Commissioners of Banking; F R Smith, Chairman of South Dakota Depositors' Guaranty Fund Commission, and A. E. Fossum, South Dakota State Deputy Superintendent of Banks.

Other sources from which the writer wishes to acknowledge receipt of helpful assistance are· W W Bowman, Secretary of Kansas Bankers' Association; W. C Macfadden, Secretary of North Dakota Bankers Association; George A Starring, Secretary of South Dakota Bankers Association, W A. Philpott, Jr, Secretary of Texas Bankers Association; and William Macferran, Jr, Asst Cashier of The State Savings Bank, Topeka, Kansas

For the early history and economic background of the bank guaranty funds, grateful recognition is given to a book entitled "The Guaranty of Bank Deposits" by Dr. Thomas Bruce Robb, published by Houghton Mifflin Company It recites the history of the various funds until 1920, just prior to the deflation period, and points out in many respects the weaknesses in principle which ultimately brought about their financial difficulties.

cessful, and it met a similar fate. The Populist Party in the middle west vigorously advocated state guaranty funds toward the close of the nineteenth century but it was not until after the 1907 panic, with its widespread financial distress, that sufficient public support was again obtained to secure the passage of laws setting up funds for the protection of depositors in state banks. At that time, guaranty funds were widely heralded as a preventive of panics, and extravagant claims urged as to the financial benefits of such legislation Great interest was manifested, and during the decade immediately ensuing funds were established in eight states—Kansas (1909), Mississippi (1914), Nebraska (1909), North Dakota (1917), Oklahoma (1907), South Dakota (1915), Texas (1909), and Washington (1917)—similar measures being defeated in many others.[2] A more recent development of the guaranty fund idea is found in Iowa and Wisconsin which in 1925 created funds for the purpose of meeting losses due to bank failures on public deposits only Similar in some respects, these latter funds differ in others, so are discussed separately at the end of this chapter.

BANK GUARANTY FUNDS

Bank guaranty funds of the first type described, as distinguished from those covering public deposits alone, may be divided into two groups depending upon whether all state banks are compelled to subscribe or whether election to do so is optional.

COMPULSORY

All institutions engaged in the business of banking under the laws of Mississippi, Nebraska, North Dakota, Oklahoma[3] and

[2] "The bank-guaranty propaganda of 1908 extended much farther than the four states that have been considered The other principal states that gave the subject serious consideration were Arkansas, Florida, Mississippi, Georgia, Tennessee, Iowa, Wisconsin, Missouri, Colorado, Nevada, Montana, North Dakota and South Dakota In most of these states bills providing for the guaranty of bank deposits were presented and defeated In some cases the agitation was extremely feeble; in others the proposal died only after a determined and bitter contest; while in four states—North and South Dakota, Mississippi, Washington—the movement resurged, resulting in guaranty laws five or six years later" "The Guaranty of Bank Deposits" by T B Robb, page 160.

[3] The act creating the Oklahoma fund was repealed in 1923

South Dakota[4] were required by their bank guaranty acts to pay assessments for the creation of a state fund to protect depositors All deposits are generally covered (this was also the case in Oklahoma) with the exception of those otherwise secured or on which a higher rate of interest is being paid by the bank than permitted by law or by the officials administering it. The guaranty is further not ordinarily applicable to a bank's obligations as endorser upon bills rediscounted nor to bills payable nor to money borrowed from correspondents or others

Regular Assessments

Provision is made for levying a regular assessment every year on the deposits eligible to guaranty until the fund exceeds a stipulated amount when collections are to be discontinued until the balance drops below a stated minimum. In case regular collections are insufficient to meet losses, all funds other than that of South Dakota may levy extra assessments within given limits Table XLIV sets forth the essential provisions of both compulsory and optional funds in this regard.

Initial Deposits

Banks operating in Mississippi when the law went into effect were required to deposit with the state treasurer (subject to the order of the board of bank examiners when countersigned by the state auditor) "as an evidence of good faith" cash or approved bonds equal in amount to $500 for every $100,000 or fraction thereof of deposits eligible to guaranty minus capital and surplus The minimum deposit permitted was set at $500 Each bank in Oklahoma was obliged after the passage of its act to deposit with the State Banking Board "as security for all its liabilities to the Depositors' Guaranty Fund" approved bonds or warrants equal to not less than 1

[4] An optional law, similar to that of Kansas, passed in 1909, never became operative because of the heavy membership fee and the requirement that at least 100 banks must participate In 1915, the compulsory law was enacted Because of the fund's insolvency, the legislature repealed this in 1925 but a petition was filed to have it placed upon referendum This was done in November, 1926 and the act of the legislature repudiated The 1927 session of the legislature enacted a substitute measure for the old law (see footnote 27) Discussion in this chapter is confined to the 1915 act and amendments pertaining thereto

TABLE XLIV

ASSESSMENT FEATURES OF BANK GUARANTY FUNDS

(Based on $100 of Eligible Deposits)

State	Regular Annual Assessment	Number of Special Assessments Annually	Amount of Each Special Assessment	Maximum Annual Assessment	Regular Assessments Cease When Fund Exceeds	Regular Assessments Begin Again When Fund Falls Below
Compulsory						
Mississippi [a]	$ 05	4	$ 05	$ 25	$ 500,000	$ 500,000
Nebraska	.10 [b]	—	.50 [c]	.60 [d]	1 5% of Deposits	1% of Deposits
North Dakota	.05	4	05	25	2% of Deposits	1 5% of Deposits
Oklahoma .	.20	None	—	20 [e]	2% of Deposits	2% of Deposits
South Dakota	25	None	—	.25	1 5% of Deposits	1% of Deposits
Optional . . .						
Kansas [a] . .	.05	4	05	.25	$1,000,000	$ 500,000
Texas . .	.25	—	1 75 [c]	2 00	5,000,000	5,000,000
Washington [f] .	.10	—	50	.60	3% of Deposits	3% of Deposits

[a] Capital and surplus are deducted from eligible deposits in ascertaining the amount subject to assessment.

[b] This is collected in two semi-annual assessments of 1/20 of 1 per cent each

[c] Maximum amount which may be collected annually in special assessments. This was 1 per cent in Nebraska until 1923.

[d] The Nebraska fund may also collect annually a special assessment not to exceed 1/4 of 1 per cent of eligible deposits to create a Bankers Conservation Fund This fund, which may at no time exceed 1/3 of 1 per cent of eligible deposits, is used to operate insolvent banks. It is intended that each bank's payments shall be repaid to it without interest unless a failed bank is returned to its stockholders In the latter event, the stockholders must pay for the use of the money and each bank contributing to the Conservation Fund shall be entitled to its proportionate share. The law further permits an assessment to be levied upon the deposits of all state banks in order to provide an Administrative Fund for the proper functioning of the Guarantee Fund Commission. This may not exceed an aggregate of $15,000 in any one year

[e] Prior to 1913 the regular and special assessments were much larger but under the amendment of that year, the regular assessment was set at 1/5 of 1 per cent and special levies of the same amount were permitted for the years 1914, 1915 and 1916. From that time until repeal of the law, no more special assessments were allowed

[f] Two funds, known respectively as the "Washington Bank Depositors' Guaranty Fund" and the "Contingent Fund" were provided for by the Washington law. The former was to consist of cash equal to 1 per cent of eligible deposits and special assessments not to exceed 1/2 of 1 per cent annually were permitted to be levied for maintaining it at such amount, while the latter was designed to be built up from regular assessments of 1/10 of 1 per cent until it should equal 3 per cent of eligible deposits It was the intent of the law that expenses and losses should be paid from the Contingent Fund and that any deficiencies should be made good from the Guaranty Fund.

per cent of deposits eligible for guaranty. The minimum deposit was also placed at $500.

Assessments on New Members

Banks organized subsequent to the enactment of the law, not including such as are formed by the reorganization or consolidation of banks which have previously complied with its terms, are required to contribute to the fund 4 per cent of their capital in Nebraska and South Dakota and 3 per cent in North Dakota (the Oklahoma levy was likewise 3 per cent). This payment plus the first two assessments must equal at least 1 per cent of average eligible deposits in Nebraska, ½ of 1 per cent of average eligible deposits in North Dakota and must place a bank in South Dakota on an equal basis with other banks previously admitted, or an additional levy for the difference is made. The Mississippi amendment of 1915 which converted the fund from an optional to a compulsory type stipulates that all banks coming under the provisions of the act after its effective date shall be subject to the same requirements, liabilities and conditions and entitled to the same privileges and benefits as provided for banks coming into the fund prior to that date

Plan for Paying Depositors

After a state bank has become insolvent and its affairs are taken over by the officials charged with that duty, the amount of guaranteed deposits is determined Each depositor in Mississippi, North Dakota and South Dakota is then ordinarily given a certificate of indebtedness as evidence of his claim. These certificates bear interest at the rate of 4 per cent (6 per cent until 1926) in Mississippi and 5 per cent in South Dakota if issued to depositors (not more than 7 per cent if sold to raise money) North Dakota fund certificates do not draw interest Dividends are paid on these certificates as funds become available either through assessment receipts or the salvage of failed banks. Until 1923, the ability of the Nebraska fund to pay losses was limited to the amount of cash on hand, but at that time it was given the right to sell interest-

bearing receivers' certificates as a means of securing ready cash These are registered in the Department of Trade and Commerce and paid in the order of their registration. The Oklahoma fund sold 6 per cent Banking Board Warrants for the same purpose.

Withdrawal Restrictions

Member banks are held liable to the fund [5] for their proportion of its existing indebtedness in case they nationalize, liquidate or cease to operate, except in Mississippi and Nebraska, where they need only pay assessments levied up to the time of their withdrawal.[6]

[5] Sections of each law pertaining to this point follow·

North Dakota—Chapter 126 of the Laws of 1917 as amended in 1919, 1921 and 1923—" Sec 13. Voluntary Liquidation or Change to a National Bank If any bank desires to go into voluntary liquidation or change to a National bank before the assessment provided for in Section 10 becomes due and payable, the provisions of this Act shall not relieve said bank from the payment of any assessments then due from it to the Depositors' Guaranty Fund, nor from any liability to become due on account of losses in banks which are closed at the time such bank applies to liquidate or change into a national bank"

Oklahoma—Act of March 6, 1913, Part of Section 48—Repealed in 1923 " Whenever any State Bank shall liquidate or cease to operate under the banking laws of this State, it shall be liable for its pro rata share of any existing indebtedness against the said Depositors' Guaranty Fund for any unpaid assessments"

South Dakota—Banking Code of 1919 as amended in 1921, 1923 and 1925 Article 3 "Par 9030 Assessments Refunded. If any bank organized under the laws of this state, having paid any assessment or assessments to the depositors' guaranty fund, shall liquidate and go out of business, or shall desire to organize as a national bank and withdraw from the protection of such guaranty fund, the portion of such assessment or assessments which shall not have been used under the provisions of this chapter shall be refunded to such bank by the depositors' guaranty fund commission; provided, that no such bank shall be released from its proper proportion of all outstanding certificates of indebtedness of the depositors' guaranty fund, issued to the depositors of failed banks, nor until it shall have received permission in writing to do so from the superintendent of banks after an examination of its condition"

[6] *Mississippi*—Section 40 of Chapter 127, Banking Laws of 1917, as amended states " A solvent guaranteed bank, upon retiring from business and liquidating its affairs, shall be entitled to receive from the state treasurer its bonds or money pledged, after all depositors in such bank and all assessments on account of the guaranteed banks in liquidation have been paid in full, but not any part of the unused assessments that may be in the bank depositors' guaranty fund"

A question as to the interpretation of this section arose in the case of " Mississippi Banking Department et al vs. Adams, 137 Miss 127" The court there held " This section is perfectly plain and unambiguous, and practically construes itself. It says that a guaranteed bank upon retiring from business shall be entitled to receive from the state treasurer its bonds

Miscellaneous

Provision is made for the liquidation of those banks which become insolvent and all funds are subrogated to the rights of depositors for sums disbursed on their accounts. Violations of the banking laws or refusal to pay assessments are subject to stipulated penalties.

Optional

Membership in the funds created by the bank guaranty laws of Kansas,[7] Texas[8] and Washington[9] was extended to banks organized and operated under their state banking laws (excluding mutual savings banks in Washington) which, by proper action of stockholders or directors (as stipulated in the act) elected to join. The Texas law differed materially from those of the other states in that banks not choosing to subscribe to the fund were compelled to file bonds with the Commissioner of Banking in an amount equal to their capital stock, as a protection to depositors. Eligibility in Kansas and Washington was also dependent upon the bank having been actively engaged in business for at least a year, being able to undergo a rigid ex-

after all its depositors have been paid in full, and after it has paid all assessments on account of the guaranteed banks in liquidation It has to pay nothing more than the assessments that have been made against it under this banking law. It is not liable for any fund under this act until an assessment has been made against it. This law limits the number of assessments each year and the amount thereof. The bank paid these assessments, and its liquidating agent is entitled to a return of these bonds."

Nebraska—Banking Laws of 1925, Sec 8022—"Voluntary Liquidation—Any bank may voluntarily liquidate by paying off all its depositors in full, and paying to the State Treasurer all moneys held by such bank as its quota of the guarantee fund . . . and the entire quota of the guarantee fund paid in by such liquidating bank shall become a part of the special reserve for the depositors' guarantee fund, as hereinafter provided . . . At the expiration of three years after a bank so liquidating shall have surrendered its authority to transact a banking business, the department shall refund to its stockholders or their representatives, their respective shares of said fund, less the proportionate share of all calls made against the depositors' guarantee fund during the period from the date of liquidation to date of payment In no case shall said fund be returned to the stockholders until eight years after receiving its charter"

[7] The Kansas fund is practically inoperative as most member banks exercised their right of withdrawal upon the Supreme Court finding it insolvent A few have remained in the hope the legislature may come to their rescue

[8] The Texas law was repealed in February, 1927

[9] The Washington fund became inoperative on January 1, 1922, by the withdrawal of all member banks

amination and having a surplus at least equal to 10 per cent of its capital.

The guaranty of any fund did not extend to deposits otherwise secured, nor, in Kansas "to a bank's obligations as indorser upon bills rediscounted, to bills payable, to money borrowed, from its correspondents or others, and any deposit on which a greater rate of interest is paid directly or indirectly by anyone than the rate approved by the bank commissioner, shall for the purpose of this act be considered money borrowed; or deposits or credit obtained by fraud or by violation of law or evidences of debt fraudulently issued." In Washington protection did not apply to the first three items above mentioned nor to deposits of public funds in excess of the bank's capital and surplus Banks paying a higher rate of interest than approved by the Guaranty Fund Board were subject to cancellation of their membership certificates. "United States, State or other public funds, if otherwise secured" and savings department deposits were not included under the Texas law.

Regular Assessments

Provision for a regular annual levy, to be supplemented by special assessments when necessary to meet heavy losses, with limitations upon the size of the fund which would be created, was characteristic of the optional as well as the compulsory fund laws Details of these have been presented in Table XLIV.

Initial Deposits

Each Kansas bank availing itself of membership in the fund was required, as an evidence of good faith, to deposit approved bonds in the same amount and under the same conditions as previously cited for the Mississippi fund. All banks electing to join the Texas or Washington guaranty funds at the time of their inception were charged an amount equal to 1 per cent of their average eligible deposits for the preceding year.

Assessments on New Members

The Kansas law provided that any bank, excluding those formed by the reorganization or consolidation of banks which had previously complied with the terms of the act, becoming a subscriber to the fund after collection of the first annual assessment in 1910 should be assessed an amount approximately equal to its proportionate share of the money in the fund after deduction of all losses. State banks and trust companies in Texas, with the same exceptions as noted for Kansas, were required by its guaranty law to pay 3 per cent of their capital and surplus into the fund, upon approval of their applications, which was "subject to adjustment on the basis of their deposits as provided for other banks now existing, at the end of one year." The assessment on new member banks in Washington, like the initial deposit for those originally covered, was placed at 1 per cent of average eligible deposits.

Plan for Paying Depositors

Upon submitting proof of claim, each Kansas depositor, whose account is guaranteed, is given a non-interest bearing certificate of indebtedness (these certificates drew 6 per cent interest until the 1925 amendment became effective, except where a contract rate existed on a deposit, in which case interest was paid on the certificate at the contract rate). As money became available, dividends were paid on these certificates but recently the Supreme Court appointed a commissioner to hold hearings on the question of determining the position of failed guaranteed banks as to the time of their final liquidation and the order in which they should be paid from the guaranty fund. The Washington fund was permitted to issue warrants calling for 5 per cent interest when money was not in hand to pay claims, but the law did not provide any particular order in which the warrants should be redeemed. The Texas law contemplated payment of all losses immediately but never made provision for utilization of warrants or certificates of indebtedness.

Withdrawal Restrictions

Withdrawal from the Kansas fund is contingent upon paying all assessments to date, and furnishing due notice to the bank commissioner and to depositors (if the bank expects to continue business, a card indicating the date when its deposits will no longer be protected must be posted at least six months prior) The Supreme Court[10] has held that bonds (or money) deposited as evidence of good faith were "pledged as a guarantee that the member bank so pledging . . . will pay such assessments as may be necessary to replenish the bank depositors' guaranty fund to enable it to pay the amount due from such fund to holders of certificates thereon which were issued to depositors of failed member banks in liquidation while the bank pledging such bonds (or money) is operating under the bank guaranty law" Therefore the Court concluded that when a solvent member bank voluntarily withdraws from the fund, liquidates or ceases to do business, "its bonds (or money) pledged may be sold, or so much of them as may be necessary, to pay assessments made to replenish the bank depositors' guaranty fund to the extent that there may be paid from such fund the amount which may be due therefrom on certificates thereon which were issued to depositors of failed member banks in liquidation at the time such withdrawing bank's deposits ceased to be guaranteed If all such withdrawing bank's bonds (or money) pledged are not necessary for that purpose, the remainder should be returned to such bank" Even though a bank's proportionate share of the fund's indebtedness exceeds the bonds pledged at the time of its withdrawal, the Court ruled there is no further assessment liability.

[10] In the case of "The State of Kansas, on the relation of Charles B. Griffith, Attorney General, Plaintiff, vs Roy L Bone, as Bank Commissioner et al, Defendants"—Opinion filed April 10, 1926 This was a proceeding in mandamus to compel the bank commissioner to sell bonds pledged as evidence of good faith by certain member banks for the payment of unpaid assessments levied by the bank commissioner against such banks, and for the interpretation of the provisions of the bank guaranty law as to the liability of banks once members of the guaranty fund, but which had voluntarily withdrawn therefrom or had liquidated their affairs and ceased to do a banking business

No procedure for leaving the fund appeared in the original Texas law but in 1925 this was amended to give banks the right to retire from the system provided they file with the Commissioner of Banking acceptable corporate or personal surety bonds equal to their capital stock, or deposit with him United States or municipal securities in the same amount The Washington act permitted any bank to withdraw from the fund upon notifying the secretary of the Guaranty Fund Board of its intention, posting a notice to depositors at least six months in advance, paying all assessments to date and depositing with the secretary of the Board an additional amount equal to ½ of 1 per cent of its annual average eligible deposits. This latter was intended to be retained as a guaranty for the payment of any assessments made for the benefit of the fund during the ensuing twelve months and any unused portion was to be refunded at the expiration of that period together with any unused portion of the 1 per cent deposit previously described.

Miscellaneous

Both the Kansas and Washington laws provided for subrogation and for imposing a 50 per cent penalty upon banks failing to pay their assessments within thirty days. The bonds pledged in Kansas may be sold in the amount necessary to meet any unpaid assessments and if a bank persists in its refusal to pay, all of them are forfeited to the fund. In the latter case, the bank is examined and if found insolvent, is liquidated If solvent, it is put out of the scheme as a member bank. A violation of the bank guaranty act disclosed by any regular or special examination is also penalized by forfeiture of the bond deposit and cancellation of membership. Forfeiture of membership and of deposits with the Guaranty Fund Board in case of violations was likewise a feature of the Washington act. The Texas law was silent on these points.

Administration

All funds other than that of Kansas are (or were at the time the fund was abolished or became inoperative) administered by boards or commissions. The Kansas fund is in charge of

the Bank Commissioner, although since 1925 there has been a State Banking Board which acts in connection with the Commissioner in an advisory capacity and is composed of that official, as chairman, and four members with at least five years banking experience, appointed by the Governor. The original laws of the Dakotas stipulated that the commission should be appointed by the Governor from a list of names submitted by state bankers. Oklahoma amended its law in 1913 to incorporate a similar feature as did Nebraska in 1923 A board of bank examiners, consisting of three elected members, administers the Mississippi law The Texas act was in charge of a board composed of three state officials and that of Washington was administered by a board consisting of two state officials and three appointed members [11] The wisdom of having the fund managed by men thoroughly acquainted with banking and its problems has been amply demonstrated in many states.

The Cost of Guaranty

The salient features of all bank guaranty funds created within the past two decades have been set forth in the preceding pages regardless of whether the fund is now active and solvent, existent and insolvent or non-existent through repeal of law or withdrawal of members. Before proceeding to a considera-

[11] The names of these bodies and the method of determining their personnel follow

Mississippi—Board of Bank Examiners—three members—one elected from each Supreme Court District.

Nebraska—Guarantee Fund Commission—seven members—appointed from a list of twenty-one men submitted by bankers

North Dakota—Depositors' Guaranty Fund Commission—five members—Governor, Manager of Bank of North Dakota and three others appointed by the Governor from a list of nine men submitted by the banks affected by the act

Oklahoma.—State Banking Board—three members—appointed by the Governor from a list of nine men submitted by the Executive Council of the State Bankers Association

South Dakota—Depositors' Guaranty Fund Commission—four members—Superintendent of Banks and three others appointed by the Governor from a list of twelve men submitted by the Executive Council of the State Bankers Association

Texas—State Banking Board—three members—Attorney General, Banking Commissioner and State Treasurer.

Washington—Guaranty Fund Board—five members—Governor and State Bank Examiner (ex officio) and three others appointed by the Governor, two of whom were to be officers or directors of member state banks.

tion of the present financial status of the various bodies, it is instructive to examine the cost of this experiment.

Prior to 1920, the experience of most funds was fairly favorable and the cost of their protection small Prices were rising and business prospering. Bank failures were relatively few and due primarily to mismanagement or dishonesty rather than economic conditions The Oklahoma fund was an exception as it had nearly broken down because the law creating it was hurriedly enacted (Oklahoma was admitted to the Union in 1907 and its bank guaranty act passed the same year) and applied, without regard to underwriting principles or proper supervision of risks, in a frontier state particularly susceptible, because of its oil discoveries, to a speculative spirit among its inhabitants, widely fluctuating property values and a rapid growth of banks Large assessments were accordingly collected until passage of the 1913 amendment, heretofore noted, which materially lowered the maximum limit. The Mississippi fund also found it necessary to collect some extra assessments in its early years

The year 1920 marks the beginning of a pronounced change in the fortunes of the various funds. An era of prolonged and widespread deflation was at hand. This was one of the most severe tests to which the funds could have been subjected as it brought ruin to many banks all over the country but particularly to those of the agricultural states in the middle West. The funds endeavored to weather the storm by assessing full maximum rates and the cost to solvent banks increased tremendously By the close of the calendar year 1926, or fiscal year ending therein, the assessments collected by all funds had considerably exceeded $40,000,000 [12] To this cost borne by

[12] The amount received by each fund, except that of Kansas, is listed below Kansas figures were not available

Mississippi	$ 1,908,090	
Nebraska	14,000,000 [a]	
North Dakota	1,642,419	
Oklahoma	3,700,000 [a]	plus bond deposits
South Dakota	3,300,000 [a]	
Texas	15,000,000 [a]	
Washington	600,000 [a]	
	$40,150,509	

[a] Estimated by fund officials.

the going banks must be added the cost to the state of contributing, directly or indirectly, towards meeting the expenses of administration. This can not be accurately determined but would amount to a substantial sum. All funds have been free from taxation

Financial Status

Complete financial statistics of operations have not been published by most funds, and are difficult, if not impossible, to secure Furthermore, the figures given out for public consumption are not always presented on the same basis. It is impossible, therefore, to compile a consolidated balance sheet. However, the information herewith presented was all obtained from authoritative sources and will give a general picture of the financial standing of each fund at the most recent date for which facts are available.

Kansas [13]

On January 27, 1927, $10,644,244 of guaranty certificates were outstanding, on which $4,484,902 had been paid in dividends, leaving $6,159,342, to which must be added approximately $700,000 of accrued interest on certificates and $1,967,830 of unfiled claims admissible to guarantee. From this gross liability of $8,827,172 should be deducted $681,854 cash held for the credit of failed guaranteed banks but not yet disbursed in dividends and $1,641,500 estimated as the recovery obtainable on assets of failed member banks in course of liquidation To meet this liability of $6,503,818 the fund had $210,679 in cash and $904,153 in bonds pledged by member banks as " evidence of good faith " which, under the Supreme Court ruling, previously mentioned, may be used to meet losses. Assuming the estimated recovery from assets of failed banks is accurate, the net deficit is $5,388,986 As the annual maximum assessments receivable would only have approximated $350,000, if the fund could have retained its membership, the futility of continuing operations in the hope of wiping out this

[13] Information contained in statement received from Roy L Bone, Bank Commissioner.

obligation is apparent. As a matter of fact, after the Supreme Court declared the fund insolvent, practically all banks withdrew and forfeited their bonds on deposit It is reported a few remain in the hope the legislature will allow them to get out without losing their bonds

Mississippi[14]

On December 31, 1927, guaranty certificates for $3,470,007 were outstanding on which $189,359 of interest had accrued. Contingent liabilities further increased the fund's obligations to a total of $3,885,946. Deducting cash on hand of $8,331 and estimated realizable assets of $1,896,274, the net deficit was $1,981,341. Assessments (at the maximum rate) in 1926 and 1927 were $289,529 and $300,186 respectively. Assuming no further failures occur and that assessment receipts are maintained at their present level, it would take between six and seven years to liquidate the present indebtedness, even if interest is ignored

Nebraska[15]

Receivers' certificates amounting to $2,241,961 were outstanding on June 30, 1926, to which should be added other liabilities of $11,010,312, these together aggregating $13,252,273 (not including $619,501 of claims in dispute) Offsetting this were cash on hand of $2,214,177 and assets of failed banks estimated as being worth $8,322,097, leaving a net deficit of $2,715,999 The double liability of stockholders would yield $3,588,284 if fully collectible,[16] and the annual income from

[14] Biennial Report of the Mississippi Banking Department—1926–27.

[15] "Fifteen Years of Guaranty Fund," Secretary's Report to Nebraska Guarantee Fund Commission as of June 30, 1926

[16] In referring to the valuation of assets and stockholders' double liability, Van E Peterson, Secretary of the Commission, states in the report cited in previous footnote·

"As a basis for this valuation we have used the percentages which we have been able to realize on assets in the past as well as our estimate of the loss in each individual bank. This, we believe, is a conservative valuation and that it will be realized in full If sufficient time is given, the actual cash realized will no doubt be more Using the figures shown it will be noted there is a difference of approximately two million seven hundred thousand dollars between the cash value of assets on hand and the liabilities to be paid To reduce this is an item of considerable value which has not been listed as an asset, and that is "Stockholders' Liability." The

assessments (at maximum rate) approximates $1,700,000. On the basis of these figures, it is certainly debatable whether this fund is now solvent Opponents claim, and not without a show of reason, that it would be insolvent if obliged to pay losses on the banks (36 on June 30, 1926 and 57 on June 30, 1927) being operated by the Commission as going concerns Unquestionably, this fund would have been long since insolvent had the old receivership system for administering the affairs of failed banks been continued. The Commission, consisting of bankers, created in 1923, has, however, substantially lowered the cost of handling a bank in receivership and materially increased the realization on its assets. There has been no default in the payment of principal and interest of receivers' certificates (as elsewhere noted, these are sold to provide cash and are not certificates of indebtedness issued to holders of approved deposit claims), as was the case in Oklahoma, so there is considerable justification for the assertion of the Secretary that "truly, Nebraska is a remarkable state and tells a story no other state can tell" Nevertheless, depositors are obliged to wait for their money until the affairs of the failed banks are wound up, and time alone can tell whether assets will be adequate to meet liabilities. There has been agitation recently for a state appropriation [17] to assist in paying depositors at once The future of this fund, the only one not now admittedly insolvent or defunct, will be watched with interest.

North Dakota [18]

capital stock of all banks which have failed since the Guaranty Fund Law has been in effect is $4,268,000, which would give a stockholders' liability of the same amount Of this but $679,715 93 has been collected, leaving a possible collection upon $3,588,284 07 Unfortunately, and resulting in much loss to the Guaranty Fund, our Constitution provides that no action can be maintained against a stockholder on his stockholder's liability until all assets have been exhausted This is one of the greatest handicaps we have to meet It is certain, however, that a very large sum will be realized from this amount, and during the past few months a large number of suits have been started on this stockholders' liability" Page 10.

[17] Editorials entitled "What Nebraska Owes its Bankers" and "The State and the Guaranty Fund" appearing in the Lincoln Star, Aug 19, 1927 and Sept. 14, 1927 Also see address by C M Skiles, General Counsel, Guarantee Fund Commission, delivered before Laymen's Club of Lincoln, Feb 14, 1928.

[18] Report on Audit of Depositors' Guaranty Fund—North Dakota Journal of the House, Jan 27, 1927

Excluding the first two banks that failed in North Dakota, whose depositors were paid in full, there were 262 failures between November 15, 1920 and December 31, 1926. These have been classified by the Commission as follows:

Class	Number	Period in Which Failing
A	58	11-15-20 to 6-30-23
B	23	7- 1-23 to 9-30-23
C	17	10- 1-23 to 11-15-23
D	27	11-16-23 to 12-31-23
Unclassified	137	1- 1-24 to 12-31-26

Certificates of indebtedness totalling $7,552,128 were issued to depositors of the first four classes. A dividend of 10 per cent has been authorized on these. By the close of 1926, $792,-827 had been paid by the fund and $245,095 by receivers, leaving a net liability on certificates of $6,514,206 Claims of depositors, in these same banks, which have been contested and upon which the fund's ultimate liability is as yet uncertain, aggregated $5,485,149 Total deposits of banks in the "Unclassified" group were $14,429,431, of which $9,410,256 are admitted as guaranteed and $731,174 as doubtful. The balance in the fund amounted to $606,366 but $67,014 of this comprised special deposits in closed banks which were made in the hope of saving institutions hard pressed for cash, and which, in spite of ranking as preferred liens, may not be fully returned. As assets held by the Receiver of Closed Banks are not expected to decrease the liability to any great extent, $25,-000,000 is probably a fair estimate of the present indebtedness. Maximum receipts from assessments are roughly $180,000 per year. Even if disputed claims are thrown [19] out, the estimate

[19] In a letter dated December 24, 1926, W C. Macfadden, Secretary of the North Dakota Bankers Association, refers as follows to the attitude of the Commission toward the claims:

"Up to the present time the activities of the Guaranty Fund Commission have been devoted to efforts to reduce the liability of the fund to the lowest possible amount, and the Commission is throwing out several million dollars worth of claims that it hardly seems fair should be thrown out. Where any evidence can be found of depositors receiving a higher rate of interest than provided for in the law or where correspondence discloses the possibility of promises of bonuses or higher rates of interest, the claims are thrown out; also all claims that are, as the Commission puts it, based on exchange of credit For instance, if a bank held an agency for a life insurance company and was writing a considerable amount of life insurance premiums, in many cases arrangements were made for the

of North Dakota's Public Auditor and Accountant "that it will require over ninety years to pay off this liability on the basis of the present net income to the fund" is hardly an exaggeration

Oklahoma[20]

During the life of the guaranty fund, 271 member banks failed or consolidated with other state banks and 316 were either consolidated with or converted to national banks. By October, 1921, the fund had been forced into insolvency. The reason for repealing the law in 1923 and the status of the fund at that time are well set forth in the words of the present Bank Commissioner, O B. Mothersead.

"The repeal of the law was imperative, as the entire capital and surplus of all banks remaining in the system were jeopardized to the extent that had the law not been repealed and had the obligations created by the law been liquidated, it would have wiped out practically every bank in the state

"At the time of the repeal there was outstanding $1,336,000 in Banking Board Warrants These warrants had been issued for the purpose of paying depositors in failed banks and were mostly held by the banks themselves, and were distributed very evenly among the banks However, there was no provision made in the repeal for payment of these warrants.

"In addition to the Banking Board Warrants outstanding, there was due to depositors in banks that had failed from the time the law became insolvent and inactive down to the date of its repeal, about $6,000,000. This amount has since been reduced by means of liquidation, but there still remains a large deficit in the fund, and it is not likely now that any of the Banking Board Warrants or any of the amount due to depositors under the provisions of that law will ever be paid."

South Dakota[21]

Up to the first of January, 1926, the South Dakota fund had issued $33,994,986 of certificates of indebtedness to depositors

insurance company to accept certificates of deposit instead of actual remittances for premiums written These claims are all thrown out, and while the claims that have been filed show a total amount of from $25,000,000 to $30,000,000, it seems to be the opinion of many that by the methods pursued by the Commission, the total claims allowed will not exceed $15,000,000 to $18,000,000

[20] Information supplied by O B Mothersead, Oklahoma State Bank Commissioner

[21] Report of the South Dakota Depositors' Guaranty Fund Commission, January 2d, 1926.

holding approved claims against member banks Dividends of \$3,412,845 had been paid on these. To the still existent liability of \$30,582,141 should be added \$12,795,852 representing claims in controversy or acknowledged accounts for which certificates will ultimately be issued. The assets comprised a balance of \$320,820 in the guaranty fund, deposits of \$115,689 in closed banks and a salvage on assets taken over by the fund estimated at 50 per cent. Assuming actual realization on the latter equals the expected, the fund's net liability is more than \$20,000,000 and drawing interest at the rate of 5 per cent. The estimated yield from assessments is \$250,000 annually which is less than one-fourth of the amount essential for meeting interest payments on net indebtedness.

Texas[22]

Between January 1, 1910, and December 1, 1919, only 20 guaranty banks failed, involving a total loss to the fund of about one million dollars From January 1, 1920, to January 1, 1926, there were 150 failures, of which 52 resulted in no loss to the fund since the banks were reorganized by the Banking Department. Over \$16,000,000 were paid out by the fund in meeting the losses of the other 98 After passage of the 1925 amendment, permitting banks to leave the fund and elect the Bond Security Plan in its stead, more than 650 banks made the transition, and within little more than a year after January 1, 1925, 88 of them nationalized. Relatively few remained in the fund. The guaranty system was abandoned in 1927 after having imposed a very heavy financial burden upon member banks It is the writer's understanding all losses have been paid which was only possible because of the very large assessments the fund could collect.

Washington[23]

This fund was very short lived Enacted in 1917, it became inoperative on January 1, 1922 by withdrawal of members.

[22] Address entitled "Our State Banking System" delivered before the Texas Bankers Association by Chas O. Austin, Texas Commissioner of Banking Printed in the Texas Bankers Record, June, 1926.

[23] Letter of H H Hansen, Deputy Supervisor of Banking, State Division of Banking, Olympia, November 17, 1926

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The events leading to its downfall were summarized for the writer by an official of the Washington Division of Banking who said:

> "The Scandinavian American Bank of Seattle, the largest member of the Guaranty System, with deposits of about $10,000,000, closed its doors June 30, 1921 It is obvious that even in the best of times it would have strained the resources of the 119 member banks to raise the sum necessary to pay the depositors in full within a reasonable length of time and under the conditions then existing it was impossible. Believing it necessary in order to safeguard the interests of their own depositors, all member banks withdrew after having paid about $600,000, more than sufficient to consume their annual operating profits. Some of the member banks had to levy an assessment against their stockholders in order to meet the loss"

Extent of Insolvency Summarized

Sixty million dollars is probably a fair estimate of the combined net shortage for all eight funds at the close of 1926. This amount is 50 per cent greater than the total assessment receipts during their entire history and is 47 per cent of the aggregate paid-in capital stock of the 4,385 state banks shown by the Comptroller of the Currency's report to be doing business in these states on June 30, 1926 To extinguish this debt would practically wipe out the surplus and undivided profits of these 4,385 solvent banks, many of which were never members of the system The utter hopelessness of expecting banks to come to the rescue of their funds, even if they could legally be required so to do is especially obvious in the Dakotas since the net liability in each jurisdiction is more than double the combined capital stock, surplus and undivided profits of all its existent state banks.

No State Liability

Responsibility for the solvency of its fund is not assumed by any state On the contrary, the statutes creating the funds of Kansas, Mississippi, North Dakota, Oklahoma and Washington specifically provided for a penalty to be imposed upon any bank which should advertise or by other means convey the impression that its deposits were guaranteed by the state.

Nevertheless, assumption by the state of the fund's obligations has been strongly urged, in many cases on the ground that depositors generally believed that the state was standing behind the solvency of its fund. A bill was introduced in the 1927 session of the Kansas legislature proposing to submit to voters a bond issue of $6,000,000 to pay individual depositors who lost their money through blind faith in the guaranty signs. It was not enacted. The Mississippi legislature, at its 1926 session, did not react favorably to a suggestion of the Superintendent of Banks that it provide for the retirement of outstanding guaranty certificates. Mention has already been made of the agitation for having the state of Nebraska supply funds for paying off at once depositors in closed banks. Apparently, action in North Dakota is being deferred until the fund's final net liability can be ascertained [24] Both voters and legislature of Oklahoma have declined to meet that fund's indebtedness,[25] whereas in South Dakota the voters refused to sustain the action of the legislature, on referendum in 1926, repealing the act, because, it is asserted,[26] they wanted the state to assume the

[24] See footnote 19

[25] "At the time the law was repealed, the legislature refused to make any provisions for payment of the obligations due Since the repeal, the matter was submitted to vote of the people on a proposition to either levy a tax or issue bonds to pay the deficit The proposition was turned down by a large majority." O B Mothersead, Oklahoma State Bank Commissioner

[26] The following excerpts are taken from an address by Fred R. Smith, South Dakota Superintendent of Banks, before the 1926 Summer Meeting of the South Dakota Bar Association

"One-fourth of one per cent doesn't sound so very great, but when you interpret that in terms of ratio to capital stock it means three per cent, an annual assessment of three per cent on the capital stock invested in banking business in the state system in the State of South Dakota is to be paid to the guaranty system, and for what purpose? For the purpose of maintaining an institution that so long as it exists will find at the close of every year three years more of retrogression in its progress toward attempting to pay the liability in full

"The legislature, after a study that has exceeded, I think, the study given to any other subject of legislation, and after conferences with their constituents beyond that given any other legislative subject in recent years, abolished the guaranty system It was referred to the people, to be voted upon at the General Election in November It was referred to the people, not for the purpose and not with the belief that there would ever be a time when the banking institutions could take care of this obligation, but with a desire to have the system continued until the forces affected would get their strength behind a movement to force the State of South Dakota, by means of some form of bonded indebtedness to pay the depositors of closed banks.

fund's obligations and believed the support of bankers to this end could only be secured by forcing them to continue paying assessments until that should be brought about The problem came up again before the 1927 legislature and a different sort of guaranty law enacted as a substitution for the old measure.[27] It will be interesting to note whether a petition will also be filed to have this submitted to the people on referendum.

Causes of Failure

The immediate cause of the disastrous losses experienced by the funds in recent years was the deflation period following upon the heels of the war boom. As a result of it, banks all over the country were hard hit, but particularly those in the agricultural belt Many financial institutions failed and carried others down with them Banks belonging to guaranty funds were no exception. The fund may have had some virtue in preventing a "run" upon an individual bank occasioned by lack of confidence but it was not adequate to cope with a period of rapidly falling prices and business stagnation. Some idea of the extent to which state banks suffered during these years may be obtained from Table XLV It shows for each guaranty fund state the number of failures and the number of solvent banks during each of the past ten years. The total banks and failures (among them) in these eight states are likewise compared with the total banks and failures in the whole country.

Inability of most funds to withstand the heavy financial drains upon them during this time may be traced to a number of underlying factors. Principal among these were:

"I defy any man to tell me that it is reasonable to ask a business to continue the payment of an assessment when the only purpose of asking for that continued assessment is to force that business into line as a power in asking or forcing the people of the State of South Dakota, through some tax medium, to bear the burden of the loss sustained by the depositors of closed state banks"

[27] State banks are required to compute and contribute assessments annually the same as before Instead of these contributions being placed in one fund and made available for distribution to depositors in all banks, each bank now maintains its own fund available only for its own depositors in the event of suspension. The various amounts thus set aside are now placed in safekeeping with the State Treasurer instead of being retained in the several banks.

TABLE XLV

STATE (COMMERCIAL) BANKS AND THEIR FAILURES

1917–1926

Year Ending June 30	Kansas		Mississippi		Nebraska		North Dakota		Oklahoma		South Dakota		Texas		Washington		Total for Eight States		Total for Entire United States	
	B	F	B	F	B	F	B	F	B	F	B	F	B	F	B	F	B	F	B	F
1917	987	0	251	1	837	1	691	0	558	0	488	1	785	1	275	3	4,872	7	15,968	15
1918	1,022	2	255	0	910	0	685	0	579	0	502	0	810	0	271	1	5,034	3	16,596	12
1919	1,068	1	293	0	957	0	706	0	582	2	519	0	834	5	274	1	5,233	9	17,225	35
1920	1,083	2	324	0	1,008	2	713	2	611	1	558	1	908	1	306	0	5,511	9	18,195	32
1921	1,112	4	324	2	998	16	674	51	622	10	566	1	937	25	298	5	5,531	114	18,875	263
1922	1,080	17	319	5	970	21	660	12	486	35	547	5	905	31	276	6	5,243	132	18,232	306
1923	1,050	17	325	4	944	18	643	19	443	13	546	7	881	7	268	4	5,100	89	18,043	202
1924	1,015	29	322	4	925	19	518	127	385	58	427	117	867	7	261	7	4,720	368	17,436	699
1925	1,004	13	323	3	900	11	494	31	380	8	405	31	771	22	243	5	4,520	124	16,983	421
1926	974	22	322	1	878	23	438	36	368	13	352	49	806	15	247	2	4,385	161	16,493	470

Column *B* indicates the number of banks in the state at the end of the year. Column *F* indicates the number of banks failing during the year.

Source of Data.—Reports of the Comptroller of the Currency, 1917–1926. Note: in several instances the figures given include some banks other than state (commercial) but these do not affect the totals appreciably.

1. Too Great Concentration of Risk

These funds, for the most part, were located in states primarily agricultural Any influences affecting crop prices were necessarily transmitted to them. Losses were accordingly very much heavier than in the country as a whole. To illustrate, for the ten-year period 1917–1926, losses of the funds from failures averaged over 2 per cent of guaranteed deposits in North Dakota and South Dakota, whereas for the entire United States, the liabilities (not just those to depositors) of all failed state banks, without deduction for possible salvage of assets, averaged approximately 6/10 of 1 per cent of total individual deposits.[28]

2. Low Assessment Rates

The maximum assessment rates collectible in five states did not exceed one-fourth of 1 per cent, and in three of these—Kansas, Mississippi and Washington—only a regular levy of 1/20 of 1 per cent was collected for a number of years,[29] so an

[28] Information for the subjoined table was secured from annual reports of The Comptroller of the Currency, 1917 to 1926.

Year Ending June 30	Total State Banks in U. S	Combined Individual Deposits (In 000's)	State Bank Failures	Combined Liabilities—Failed Banks (In 000's)
1917	15,968	$ 5,390,824	15	$ 3,351
1918	16,596	6,114,199	12	1,094
1919	17,225	8,999,131	35	7,775
1920	18,195	10,873,035	32	11,945
1921	18,875	10,809,788	263	24,810
1922	18,232	10,107,597	306	73,044
1923	18,043	11,130,142	202	53,886
1924	17,436	11,755,233	699	182,136
1925	16,983	12,677,946	421	112,301
1926	16,493	13,148,489	470	144,718
		$101,006,384		$615,060

[29] In the 1907 Report of the Comptroller of the Currency, page 27, it was estimated that from the establishment of the national banking system (in 1863) until 1907, the average annual loss to depositors in national banks amounted to only 1/20 of 1 per cent of their deposits Apparently this estimate influenced the regular assessment rate adopted by at least these three funds. It was inapplicable, however, because it was a national (rather than a state) average, covered a long period of time, and was based on the experience of a class of banks under more rigid supervision and whose depositors were protected by greater safeguards

adequate reserve was not created. Nor were the fixed rates of one-fifth of 1 per cent in Oklahoma (subsequent to 1916) and one-fourth of 1 per cent in South Dakota enough to produce an emergency surplus of any consequence The test in Washington came early and found that fund unprepared as respects surplus. Even its more liberal assessment privilege proved insufficient. Had it not been for the special assessment privileges possessed by the Nebraska and Texas funds, their experience would have been the same as that of others.

3 Inadequate Reserves

Bank failures traceable to economic conditions necessarily tend to be concentrated in a period when all business is depressed Their effect, accordingly, is more disastrous. Since it is the goal of a bank guaranty fund to avert this sudden shock and distribute its force over a period of years, a substantial reserve must be on hand. Time has demonstrated that the maximum limits placed upon the size of these funds were too low and the means of building them up inadequate.

4 Poor Underwriting Selection and Supervision of Risks

All going banks were covered by the compulsory funds and membership in the optional ones was not difficult of attainment. No attempt was made to proportion the rate charged to the hazard presented. It is claimed that insurance of the risk made the public more careless as to the choice of their depositories All banks appeared to be on the same plane as regards safety, and the necessity for discriminating with respect to the character, ability and experience of the banker was less pronounced It is contended new banks could more easily secure deposits and recklessness was encouraged More rigid and extensive supervision was needed than ever before but unfortunately this did not keep pace [30] with the problems pre-

[30] The following quotations are from men who have been in a position to follow carefully the operations of their respective guaranty funds

Nebraska—"Inasmuch as the state bankers of Nebraska are required, and do pay the losses in failed banks, it still seems to me that the supervision of solvent banks should be placed upon a different basis. The system now employed is entirely wrong. If it were possible, and I believe it is, the administration of banking laws should be removed from political

sented by the guaranty system Some assert political influence played a large part in determining whether or not a bank should

control"—Sixteen Years of Guaranty Fund, a report by Van E Peterson, Secretary, August 11, 1927, page 50 The official above cited likewise informed the author that the policy as regards closing banks which have gotten into difficulty is determined by the Secretary of Trade and Commerce. Accordingly, there is a tendency whenever the political group in control changes to let the new party take over the insolvent banks He further asserts this accounts for the large number of insolvent banks now on the hands of the Commission and that a large percentage of the losses which have been paid are due to the fact certain banks were permitted to continue activities long after they became insolvent

North Dakota—"In our state a body of disgruntled radicals obtained political control of the state They have done anything and everything that could be done to cripple the banking structure of the state Where a banker would not agree with their political views a few of them would get together and organize a new bank in order to punish the banker opposing their political policies Encouragement was given by the banking department and the governor to do this and the whole banking structure was weakened to an extent that when bank troubles developed, over three hundred small banks failed and while there were only a few failures of larger banks, it was to be expected, of course, that failure of so many small banks would pull down a few of the weak, larger banks."—W C Macfadden, Secretary of North Dakota Bankers Association Letter of December 14, 1926

Oklahoma—"It is my judgment that any law which seeks to guarantee deposits in banks is fundamentally unsound, as it places a premium on incompetence, if not actual crookedness, and opens up a field which presents temptations to the unscrupulous politician In this State it resulted in the granting of charters promiscuously and in many instances charters were granted to inexperienced and incompetent parties I do not assume that the inside story of the manner in which the Depositors' Guaranty Fund in the State of Oklahoma was handled will ever be revealed, and the only good that could come from a revelation of that kind would be merely as a warning to other states which contemplate adopting a law of that kind"—O B Mothersead, Oklahoma State Bank Commissioner

Texas—"From 1910 down to a very recent date it was quite the popular fashion for men who were out of jobs or who had failed in some other business to organize Guaranty Fund banks and offer the public the same degree of safety afforded by the old, well-established, conservative banker of ample capital and experience The speaker ventures the assertion that more banks have been organized in our state to furnish salaries for jobless men than to meet any necessity for banking facilities

"At the same time, the speaker believes a vigorous and forceful policy of enforcing the law, and strict requirements respecting the manner in which many of our banks have been conducted would have operated to prevent, to a very large extent, the enormous losses suffered by the Guaranty Fund since its establishment The existence of the law has in itself invited weak and vicious banking methods A number of banks have built up their business almost solely through the exploitation of the protection afforded the depositors by the Guaranty Fund Many bankers have engaged in reckless and unsafe business methods of banking, upon the theory that if their banks should get into trouble, the Guaranty Fund would come along and contribute enough fresh capital to absorb their losses. A number of dishonest bankers have systematically stolen from their banks year after year and used the funds for personal transactions and speculative deals, knowing that if their banks failed the Guaranty Fund would pay the depositors and there would be no demand on the part of the depositors

be closed. Certain it is that the standards of membership were not maintained at the high level necessary for success.

5. *Maximum Salvage Not Obtained*

In case an insolvent bank is taken over immediately and its affairs administered by competent men, the loss to depositors may be kept low If left to run after it should be closed or if improperly handled, realization on assets may fall and expenses mount It is impossible to ascertain the exact efficiency of various funds in keeping their losses down by this means but there is considerable evidence[31] to the effect they have not al-

that these dishonest officials be punished. No stretch of the imagination is required to assert that the Guaranty Fund as it has been administered in Texas has been a constant premium upon dishonesty and criminal recklessness, and carelessness in the management of some of the banks." Extracted from "Our State Banking System," an address by Chas. O Austin, Texas Commissioner of Banking, previously cited

Cf Robb, The Guaranty of Bank Deposits, Chapters 3 and 4.

[31] See footnote 30. Other citations in point are.

Kansas—In stating the opinion of the Supreme Court of Kansas in the case of State, ex rel, vs Bone, heretofore mentioned, Justice Harvey referred to charges of inefficiency as follows. "Passing upon plaintiff's motion to strike, the answers of several of the defendants contain general allegations, in substance that the administration of the guaranty fund and the liquidation of failed member banks by the bank commissioner, or under his direction, has been inefficient, wasteful and in some cases illegal, in that the liquidation of the failed member banks has been much more expensive than necessary; that the assets of such banks have been dissipated, sold for less than their value, and that certificates on the guaranty fund have been issued to persons not depositors, as defined by the statute, and not entitled thereto; with the result, (1) that the assets of failed member banks have not paid as large a percentage upon the certificates on the bank depositors' guaranty fund given to depositors of such banks as they should have paid; and (2) that there is a greater number and amount of certificates against the bank depositors' guaranty fund than there should be, and it is averred that had the liquidation of failed member banks been properly handled, the expenses of such liquidation kept down, and the assets properly collected and disbursed and had certificates on the guaranty fund been issued only to depositors rightfully entitled thereto, the assessments upon member banks provided by law for the purpose of the bank depositors' guaranty fund would have been ample for that purpose, and there would have been no necessity of selling the bonds pledged of member banks"

The court held that while an issue of this character was not pertinent to the particular case under consideration, nevertheless, any member bank might maintain a proper action to inquire into waste or illegality in the administration of the fund

Nebraska—"The Old Receivers in the paying of $14,600,000 of liabilities secured but 43 54 per cent from assets, while the Commission in paying $22,400,000 of liabilities secured 66 12 per cent from assets. Had the same ratio continued as under the Old Receivers, it would have been necessary for the Commission to have drawn on the Guaranty Fund for more than $5,000,000 in addition to what was drawn, so the increased percentage of realization on assets by the Commission amounts to a prac-

ways exerted every effort or used the best means to keep losses at a minimum

PUBLIC DEPOSITS GUARANTY FUNDS

In order to protect public deposits, properly made, of the state and its counties, townships, municipalities and school corporations against the failure of any depository bank in the state, the Iowa legislature created in 1925 a separate fund to be known as the "State Sinking Fund for Public Deposits"[32] Revenue for this fund is obtained by diverting for some stipulated period all interest up to 2½ per cent (this rate was adopted because the interest paid by banks is legally required to be at least 2½ per cent of average daily deposits) on deposits of the state or its political subdivisions The law only contemplated such diversion whenever it should be necessary to meet losses from failed banks as it expressly stated "no interest shall

tical saving of $5,000,000 to the state bankers of Nebraska in the three and one-half years In addition, it would probably have been impossible for the bankers to have met these increased assessments

"The Old Receivers did not, of course, operate going banks, so comparing only like work, we find that the cost per dollar on total realization under Old Receivers was 6 7 cents per dollar while under the Commission it has been 3 4 cents per dollar, or a reduction of practically one-half This reduction in expense amounts to a saving of $825,000 in overhead costs since the Commission has had charge of liquidation The saving of $825,000 in operating costs and the increased percentage of realization from assets of more than $5,000,000 or a total of approximately $6,000,000 in three years and a half seems to justify the bankers in their statement to the Legislature of 1923 that a commission composed of bankers selected by the bankers themselves could handle the liquidation of failed banks on a more business-like basis than the system then in effect"—Sixteen Years of Guaranty Fund, pages 48, 49 and 50 Report previously cited.

Oklahoma—"The Depositors' Guaranty Law, through the manner in which the same was administered almost wrecked the State Banking System in Oklahoma During its life, solvent banks paid into the fund about $3,700,000 in the form of assessments In addition to the assessments they lost the securities they had placed with the Banking Board for the purpose of guaranteeing the payment of assessments and the payment of Banking Board Warrants outstanding The law specifically provided that each bank should keep on deposit with the Banking Board securities equal to 1 per cent of their total average daily deposits There was a little more than $9,000,000 in Banking Board Warrants issued during this time, and the amount of salvage recovered from collections during that period was rather small, owing to the fact that the Bank Commissioner did not have sufficient help to prosecute collections diligently, as should have been done."—O B. Mothersead, Oklahoma State Bank Commissioner.

[32] Iowa "Public Funds Deposit Guaranty Act"—H. F 129 as amended by H F. 393

be diverted until the necessity therefore shall arise." Upon receiving from the superintendent of banking a list of the approved public deposits in closed banks, the state treasurer is required to divert into the fund all interest coming into his hands from state deposits and to "issue an order to the county treasurers of the several counties directing them to collect from the depository banks the interest upon all public deposits of their counties, including all interest on school funds, city and town funds, township and county funds, from the date of said order, and it shall then become the duty of all depository banks to pay such interest to the county treasurers and the county treasurers of the several counties shall so collect such funds in accordance with such order and shall remit the same to the treasurer of state" Penalties are provided for failure to pay within a certain time or for misappropriation of the interest. Diversion of interest is to be discontinued as soon as all claims are paid.

It is the duty of the superintendent of banking to direct the order in which deposits are to be paid, which he does by certifying to the state auditor a list of approved claims and the order of their preference as soon as money is available in the fund. A warrant is then issued for the amount. Upon paying a loss from the fund, the state treasurer is subrogated to the rights of the depositor.

From August 1, 1925 (when the fund began operations) until January 2, 1928, the fund received in diverted interest $3,895,533 and in dividends from failed banks $2,137,046, making a total of $6,032,579. Eleven hundred and seventy-four claims were approved and certified for payment during this time having an aggregate value of $9,421,899. In order to meet these liabilities, six million dollars of anticipatory interest bearing warrants were issued, of which approximately two and one-half millions have been retired The maximum rate of interest has been diverted ever since the inception of this fund but its net deficit, owing to excessively heavy losses, is still about three and a half million dollars

The Wisconsin legislature passed in 1925 a law creating a

special fund to be administered by the state treasurer, for the protection of state deposits only[33] This is to be built up by setting aside each year from the interest received on deposits an amount equal to ½ of 1 per cent of the principal, and is to be used for indemnifying the state for any losses due to failure of banks in which state money may be on deposit. A bank operating under the law does not furnish a depository bond provided the amount on deposit with it is under $50,000 as this measure was enacted in order to avoid reducing the interest rate from 3 to 2½ per cent as, it was believed, would have been necessary if depository bonds were still to be required. Even yet a bond is required for the entire amount on deposit if that exceeds $50,000 This necessarily tends to limit losses to the state, especially on its large working accounts, as these range between $300,000 and $500,000.

At the close of 1926, the balance in this fund was $67,075. Three of the banks in which state moneys were deposited had failed but nothing had yet been charged against the fund for the reason that the banks were still in the process of liquidation.

[33] Wisconsin Statutes of 1925, 14 44, Sec 4.

CHAPTER XIII

PUBLIC PROPERTY INSURANCE FUNDS [1]

Taxpayers' money, to the extent of many millions of dollars, has been expended by the various state governments to provide buildings, equipment and other facilities essential for administering laws, operating institutions and carrying on numerous and varied miscellaneous functions This property differs quite widely both in construction and use. A capitol building, for instance, may be a monumental structure of splendid construction but an agricultural testing and experiment station in a remote section of the state be made largely of wood. One building may serve as office quarters for state officials, another as a laboratory for a state university or agricultural college, and

[1] To ascertain the situation with respect to the insurance of state property against fire loss, the author personally visited or corresponded with insurance commissioners or other officials in all states of the Union As respects the emergency reserves or self-insurance funds which he found to be operating, information was personally secured from
Colorado—L E Girard, Deputy Secretary of State, and J. M. Wood, Public Examiner, Denver
Iowa—E. J Hines, Secretary, State Board of Control, Des Moines
Michigan—L T Hands, State Commissioner of Insurance, Lansing
Minnesota—J H Phillips, Actuary, State Insurance Division, St. Paul
North Dakota—S. A Olsness, State Commissioner of Insurance, Bismarck
Oregon—Frank Meredith, State Budget Officer, Salem
Wisconsin—W. H Pierstorff, Manager, State Insurance Fund, Madison

Grateful acknowledgment is made to the above and to the following officials who supplied necessary data by correspondence
Alabama—R P. Coleman, Deputy Superintendent, State Insurance Department, Montgomery
Florida—J C Luning, State Treasurer and Insurance Commissioner, Tallahassee
New Jersey—C A. Gough, Deputy Commissioner, State Bureau of Insurance, Trenton
South Carolina—M J. Miller, Secretary, State Sinking Fund Commission, Columbia
South Dakota—E. A Jones, State Auditor, and G H Helgerson, State Commissioner of Insurance, Pierre
Tennessee—A S Caldwell, State Commissioner of Insurance and Banking, Nashville
Vermont—R. C. Clark, State Commissioner of Banking and Insurance, Montpelier

The information secured in the manner described has been supplemented by published reports and miscellaneous material.

a third as a place of confinement for the insane or violators of the law. The contents of certain buildings may be flammable or even explosive and of others non-combustible. Some may be small and scattered throughout the state whereas others be large and concentrated in one section But regardless of construction or use, all buildings are subject in some degree to the peril of fire and common sense dictates that adequate measures be taken to prevent damage from that source and to indemnify the state if the unexpected should occur

The student interested in contrasting the attitude of the average legislator towards public property entrusted to his care with the attitude of the same individual towards his own private possessions would find an interesting sidelight in the extent to which state property is insured against fire. Nine [2] states carry no insurance whatsoever, three [3] follow the same general practice but make a few exceptions in the case of buildings subject to a particularly severe hazard; two [4] had self-insurance funds at one time but have abandoned this system, as will be noted later, and now are uninsured except for certain limited classes of property; one [5] carries insurance with private companies in spite of directory resolutions passed by the legislature which frown upon the practice; twenty-one [6] are covered by private carriers authorized to transact business within the state; five [7] have emergency reserve appropriations which constitute no real protection, as the subsequent discussion will reveal; two [8] are building up emergency funds but in the meantime are protected by private companies, and five [9] have self-insurance funds. Further discourse will be confined to the fourteen states which have endeavored to meet this problem by providing a fund of some sort.

[2] Illinois, Kansas, Massachusetts, Mississippi, Nebraska, New Hampshire, New York, Oklahoma and Rhode Island

[3] Missouri, Ohio and Washington.

[4] Michigan and Minnesota

[5] Texas.

[6] Arizona, Arkansas, California, Connecticut, Delaware, Georgia, Idaho, Indiana, Kentucky, Louisiana, Maine, Maryland, Montana, Nevada, New Mexico, North Carolina, Pennsylvania, Utah, Virginia, West Virginia, and Wyoming

[7] Colorado, Iowa, Oregon, South Dakota and Tennessee

[8] New Jersey and Vermont

[9] Alabama, Florida, North Dakota, South Carolina and Wisconsin

Types of Funds

Broadly speaking, state property insurance funds may be divided into two groups, the controlling factor in the classification being whether or not fundamental insurance principles underlie the methods of operation. These groups will be analyzed under the headings of emergency reserve appropriations and self-insurance funds.

Emergency Reserve Appropriations

If a building is destroyed by fire in many states, it is necessary to await a legislative appropriation for its reconstruction in the event no insurance is carried This may entail considerable inconvenience and perhaps necessitate calling a special session of the legislature.[10] To avoid such a situation, the legislature may in advance appropriate a given sum to be used, at the discretion of certain state officials or boards, for restoring or replacing property destroyed by fire This may be an outright annual appropriation designed to build up in course of time a fund of substantial size but without any particular reference to the value of the property at risk, or an appropriation intended to pay only for losses which take place during the period for which appropriations are budgeted and the balance of which reverts at the expiration of that time

Manner of Creating Funds

The law of Colorado (1925) provided that $40,000 should be appropriated annually, beginning in 1926, to create a fund which should not exceed $250,000; whereas that of Oregon (1925) stipulated that $25,000 should be set aside in 1925 and 1926 and $50,000 annually thereafter until the fund reach $300,000, when further appropriations should be made only to maintain it at that figure. Colorado's act likewise prohibited the placing of insurance with private companies as had previously been done by an Oregon legislature New Jersey's law (1913) provided that $50,000 be appropriated annually until a

[10] Several years ago an industrial reformatory in Kansas was destroyed by fire with a loss of $317,000. A special session of the legislature was called in order that funds for rebuilding might be appropriated

fund of $1,000,000 be established, the interest from which, and the principal if necessary, to be used for meeting fire and earthquake losses Permission to discontinue private insurance was granted whenever the balance should pass the $100,000 mark but this right has never been exercised Vermont passed a similar measure (1919) setting aside $10,000 annually, but its property is still covered by private carriers. Tennessee (1905) appropriated $75,000 to meet fire and tornado losses on eleemosynary institutions. Under a law which has been in force some 20 years, Iowa appropriates $100,000 biennially as a providential fund, the balance reverting to the state treasury when the next legislature meets Since 1913, South Dakota has annually appropriated $150,000 subject also to the reversion of any remaining amount

Administration

There is no uniformity among the states as respects the administration of these funds In Colorado, for example, the State Auditing Board exercises jurisdiction, in Iowa the Executive Council, In New Jersey the State House Commission and in Oregon the State Board of Control.

Nature of Coverage

The Colorado law contemplated coverage against fire losses only but the others are much broader in scope, that of Tennessee embracing damage from both fire and tornado, New Jersey fire and earthquake, South Dakota fire, lightning and tornado, Oregon fire, flood or other casualty and that of Iowa going to the extreme of covering all providential loss.

Adequacy of Funds

A casual inspection of the values to be protected by these funds immediately reveals their insufficiency in most cases. Colorado, to illustrate, inventoried its buildings, equipment and other burnable commodities at approximately $53,000,000 in 1924; the appraised value of Oregon's insurable property exceeded $15,000,000 in 1925; an ultra conservative estimate of South Dakota's buildings and personal property equalled nearly

$12,000,000 in 1926, and the value of buildings, live stock and personal property possessed by Iowa's state institutions (such as soldiers and orphans homes, hospitals, reformatories and penitentiaries) to say nothing of other property was about $15,000,000 in the same year. Yet in not one of these four states could there ever be, under existing legislation, a fund in excess of $300,000.

As a matter of fact, the situation is much worse than a perusal of the laws might indicate, for no fund to be created from regular appropriations has ever reached the maximum limit. Until the close of 1926, no money had been actually set aside from the general treasury for the Colorado fund, since the Equalization Board had placed the appropriation for this purpose in a lower class to wait until the means should become available. The Oregon appropriation of $25,000 in 1925 was wiped out the first year by a $25,700 loss in the Oregon Agricultural College, and during the biennium ending 1922, fire and storm losses to Iowa's institutions were $172,878 more than the amount of the fund. On the other hand, warrants drawn against the South Dakota fund during the period 1919 to 1926 did not at any time equal the annual appropriation and Tennessee's fund has been maintained almost intact. New Jersey's fund totalled approximately $250,000 at the end of 1926 and Vermont's had reached $117,843 by June 30 of the following year.

Self-Insurance Funds

Property insurance funds operated upon recognized insurance principles have been set up in seven states South Carolina was first in the field (1900), followed by Wisconsin (1903), Michigan (1913), Minnesota (1913), Florida (1917), North Dakota (1919) and Alabama (1923). The Michigan and Minnesota funds are no longer active owing to the failure of their state legislatures to appropriate further premiums and the subsequent exhaustion of their assets. Reference will be made to their respective characteristics throughout this section, nevertheless, in order that the reader may have a complete account of all such experiments.

Administration

Operation of the Florida, North Dakota and Wisconsin funds is entrusted to the state Commissioner of Insurance, this official likewise holding the office of State Treasurer in Florida. A separate manager under the Commissioner's supervision, is placed in immediate charge of activities, however, in the latter two states The Alabama act placed the fund under the State Board of Convict Supervisors, or its successors, whereas that of South Carolina granted jurisdiction to the Sinking Fund Commission. The Michigan Commissioner of Insurance and the Minnesota State Board of Control administered the funds of those states during their existence.

Property Covered

The Alabama and Florida funds, as did those of Michigan and Minnesota, insure state buildings and their contents only. All state property must be insured with the fund in Wisconsin, and that of counties, cities, villages, towns, school districts and library boards may be covered if the officials having custody of the same so elect [11] North Dakota makes insurance with the fund compulsory for all public property of the state or its political subdivisions except the property of towns or school districts outside the incorporated limits of any city or village, it being optional for these Coverage is likewise compulsory in South Carolina for state property (other than the capitol building), county and public school buildings and contents.

Ordinarily, the amount of insurance carried must equal from 75 to 90 per cent of the property's value, the exact proportion being stated in most acts Wisconsin, however, permits political subdivisions to obtain a smaller relative amount, but varies the rate accordingly.

Hazards Insured Against

Although the Florida fund protects against loss from fire only, the funds of Alabama, North Dakota and Wisconsin, as did those of Michigan and Minnesota, write both fire and

[11] Only 40 per cent of county, 10 per cent of city and a small proportion of school district property are insured with the Wisconsin fund.

tornado coverage. The South Carolina act appears to have contemplated only fire and lightning insurance but the Commission has been granting windstorm protection also for a number of years without any extra premium charge.

Premium Rates

Premiums charged for state insurance are, without exception, based upon so-called "board" or tariff rates of regularly admitted private carriers The full rate which, in the judgment of the administrative officials, would be levied by responsible licensed companies is assessed by the Florida, North Dakota [12] and South Carolina funds, but in Alabama only 60 per cent (80 per cent on any amount reinsured) and in Wisconsin 75 per cent of such premium is charged. Permanent continuance of the rate at the level stipulated is not intended in at least three of these states Whenever the North Dakota fund equals 10 per cent of the amount at risk, the rate is to be lowered to a charge consistent with maintaining that balance. The point at which premiums should cease was originally placed at $1,000,000 in South Carolina, but when this limit was reached in 1926, it was felt that such a sum was not then sufficient in view of the large amount of insurance in force, so the act was further modified to require that every building or property insured must have paid at least five annual premiums before it would be entitled to free coverage, even though such payments should increase the balance beyond $1,000,000. At the end of 1927, 52 per cent of the total insurance was renewed without charge under these provisions Alabama property is to be classified into five groups and dividends paid to each when the fund exceeds $500,000. The Florida and Wisconsin laws contain no features similar to the above but the manager of the fund in the latter state asserts an amendment will doubtless be enacted when the balance reaches 2 or 2½ million which will permit reduction of rates or payment of dividends

Under the Michigan act, rates were fixed by the Commissioner of Insurance, but could not exceed 60 cents per $100 of

[12] The rate on rural school property is an exception. Instead of $1.45 per $100 as charged by private stock companies, the fund's rate is $1 17. However, this class of property is customarily written by county mutuals.

protection, with the further qualification that they should be discontinued when the fund's balance should pass the $1,000,000 mark This never occurred Minnesota rates were set at 100 per cent of private company charges for the first three years, after which time they were reduced to 75 per cent of that amount

Expenses

A comparison of the expenses incurred during the existence of the various funds with net premiums collected (less refunds, reinsurance premiums and unearned premium reserve) produces the following expense ratios:

	Per cent
Alabama	25
Florida	65
North Dakota	48
South Carolina	45
Wisconsin	26

These percentages do not include any allowance for office quarters or miscellaneous services of various state officials. Moreover, all funds are free from taxation.

Fire Prevention

The Alabama Board of Administration must have an annual inspection made of all institutional property to ascertain if the hazard has changed; the State Treasurer of Florida is likewise directed to have all property inspected (though the frequency with which this is done has not been specified in the law) and may order hazardous conditions remedied; and the Wisconsin fund has all property inspected at least once a year, though no definite requirement to that effect appears in the law. Both the North Dakota and South Carolina acts were silent on this point, but the Sinking Fund Commission in the latter state recognizes the need for fire protection activities and has recently requested authorization for employing a full time inspector [13] Failure to keep property safe from fire constituted

[13] Report of the Sinking Fund Commissioners—Fiscal Year Ending December 31, 1927. On pages 9 and 10 appear the following recommendations with respect to Fire Protection.

"We wish to reiterate our statement made in the Annual Report for 1926 that if the Sinking Fund Commission is to continue our schedule of

non-feasance in office according to the Minnesota act but no provision for inspection was made therein nor in that of Michigan On the basis of data available, it would not seem that fire prevention is yet receiving the proper emphasis from the various funds.

Financial Status

Salient figures with respect to the cumulative operations of the five active funds are set forth in Table XLVI as of the close of calendar year 1926, or fiscal year ending in 1926.

A study of Table XLVI indicates that the Alabama fund has had a high loss ratio during the short period of its activities and suggests the wisdom of increasing rates or revising the plan of reinsurance. In connection with the large balance shown for the Wisconsin fund, it is of interest to recall that its career until 1917 had been quite checkered In fact, losses had to be paid from the General Fund of the state during the first two years of its existence on account of the burning of the Capitol Building A deficit was again incurred in 1916 owing to excessive losses for the fiscal years ending June 30, 1914 and June 30, 1916. All funds were solvent as of the date mentioned.

Premiums were paid to the Michigan fund for eight years, ceasing in 1921. The balance in the fund at the date premiums stopped was held to meet future losses and amounted to $13,-

free insurance on property that has been continuously insured with us for five years or more every possible precaution looking to the prevention of fires on the property insured by us must be taken To this end it is recommended that the actual saving effected on the property insured by us through the issuance of these free insurance policies be used in the installation of fire prevention equipment and the improvement of the property through the removal and elimination of special fire hazards A good start has been made at several of the larger State Institutions in the installation of modern automatic sprinkler systems This work of installing sprinkler systems in the State Institutions should be pushed to an early conclusion It is the duty of the State to protect not only the property at these institutions but the lives of the inmates and occupants

"It is recommended that the Sinking Fund Commission be authorized to employ a full time inspector who should be clothed with authority to enforce reasonable recommendations looking to the improvement of the property insured by the Sinking Fund Commission in the matter of protection against the occurrence of fire and elimination of special fire hazards It is our belief that such an employee would materially reduce the actual fire loss and effect a far greater saving than the amount expended on the position."

TABLE XLVI

FINANCIAL STATISTICS FOR ACTIVE SELF-INSURANCE FUNDS COVERING PUBLIC PROPERTY

Figures for Premiums, Interest, Losses and Expenses cover entire period of activities

State	Period Ending	Net Premiums Collected less Refunds, Reinsurance Premiums and Unearned Premium Reserve	Interest Earned and Accrued[a]	Losses Paid less Those Borne by Reinsurers	Expenses of Operation	Insurance in Force in 1926			Balance in Fund
						Retained	Reinsured	Total	
Alabama . .	6-17-26	$ 288,984	$ 1,953	$219,142	$7,334	$11,434,413F	$5,135,993F	$16,570,406F	$ 64,461
						15,234,106T	—	15,234,106T	
Florida	12-31-26	274,904	33,325	82,714	17,996	4,056,644F	2,691,750F	6,748,394F	208,519
North Dakota	8-31-26	1,012,591	76,481	381,017	48,670	20,350,045F	9,492,102F	29,842,147F	659,385
						15,240,136T	9,000,000T	24,240,136T	
South Carolina	12-31-26	1,213,797	274,036	404,942	54,266	[b]	[b]	32,452,706[c]	1,028,625
Wisconsin	12-31-26	1,915,303	288,700	718,005	49,405	47,614,666F	—	47,614,666F	1,436,553
						41,847,847T	—	41,847,847T	

[a] Losses and gains on investments included. The amounts of these are very small.
[b] Data showing proportion reinsured in 1926 not available. All reinsurance contracts were cancelled by the reinsuring companies in 1927.
[c] Windstorm protection included in fire policies without extra charge.
F indicates fire insurance. T indicates tornado insurance.

512 on June 30, 1926. Appropriations for premiums were only made six years in Minnesota, being discontinued in 1919 The fund was finally exhausted in 1922 by the burning of two state normal schools. In light of the circumstances, these funds can not be said to have failed, for both were financially sound at the time the scheme was abandoned.

Reinsurance

All funds, except that of Wisconsin, now reinsure or endeavor to reinsure part of their liability. The amount of fire coverage retained in Alabama varies from $5,000 to $50,000 depending upon the construction of the building. Thus, the maximum on a frame building with a shingle roof would be $5,000 and on a brick, frame or concrete building of fireproof construction, might be as high as $50,000. Any amount over and above the retention is carried with approved companies at the best rate obtainable and is "written up on separate policies at 80 per cent of the manual rate, instead of 60 per cent as in the case of all retained insurance, provided a contract can be made at this rate."[14] The tornado risk is not reinsured This neglect is certainly open to criticism in view of the large amount of that coverage in force. The retention on a single risk is $50,000 in Florida and all over that amount is reinsured, premiums on the reinsurance being paid from the general treasury rather than from the fire fund Until 1925, the North Dakota fund could only retain insurance on any risk to the extent of $100,000 and was obliged by law to reinsure the excess. An amendment of that year divided all property into three classes and established different retention limits for each. Thus, on Class 1, comprising fireproof buildings with fireproof or combustible roofs, the fund covers the whole risk; on Class 2, consisting of brick, stone or concrete buildings, with or without approved roofs, it is limited to 50 per cent of the value but in no case more than $100,000; on Class 3, including all other property, it carries the full amount on risks of $10,000 or less, but not over $25,000 in any case Fund officials are endeavor-

[14] Rules and Regulations for the Administration of the State Insurance Fund—Alabama

ing to have the reinsurance section of the law repealed [15] as they maintain the fund is now adequate to meet any emergency. The Sinking Fund Commission in South Carolina is required by law to reinsure such portion of its insurance liability "as is commensurate with the principles of safe underwriting" but is permitted to prescribe its own rules and regulations for placing and handling this Its practice has been to reinsure properties subject to a serious hazard but lately it has experienced difficulty in securing desirable reinsurance connections and has therefore created a special reinsurance fund of its own [16] No

[15] "It will be remembered that two years ago the Department recommended a change in the reinsurance plan from the original draft of the law . to the more scientific plan of placing reinsurance on a classification of risk principle This amendment was passed by the Legislature . . , and the Department has operated accordingly for two years. It will also be recalled that at that time, while I granted that the new plan was preferable over the old, if the Legislature held that reinsurance was necessary, I advocated that the state carry all its risks except the Capitol Building and twine stock at the Penitentiary. After two years experience I am more convinced than ever that the state should retain the entire line, and I hereby most emphatically urge that the Legislature make a thorough study of the proposition with a view to repealing the reinsurance feature at the ensuing session Since we shall without doubt have a million dollar fund by that time to back us up, we see no reason why the state could not better assume the entire risk from then on than to carry the first hundred thousand in the early period of the enterprise, with not a dollar of reserve, except the state's credit"—Excerpt from letter dated Oct. 25, 1926, of S A Olsness, North Dakota Commissioner of Insurance, transmitting 1926 Report of the Fire and Tornado Fund to the Governor and Legislature

[16] The subjoined excerpts are from the 1927 report of the South Carolina Sinking Fund Commissioners, pages 6 and 7.

"Due to excessive fire losses at Clemson College, the Penitentiary and of public school buildings in Anderson, Kershaw and Gaffney, our reinsurance connections advised us that our reinsurance contract would be terminated on August 1, 1927. This notification was given to us some sixty days prior to that date in order that we might have time to make other reinsurance connections.

"Every possible effort was made to secure a desirable reinsurance contract prior to August 1st but it was found impossible to secure reinsurance connections by that date Realizing the absolute necessity of protection against excessive losses on individual risks insured by the Commission, it was decided to create a special reinsurance fund to pay all losses in excess of the net amount retained by the Sinking Fund Commission on individual risks The Commission decided to make available for this fund the sum of $200,000 from our Insurance Fund if so much be necessary, and to further augment this fund by paying into same monthly the approximate amount that had formerly been expended for reinsurance Effective August 1st, there has been paid into this reinsurance fund $5,000 monthly and the return premium on account of cancellation of the existing reinsurance policies on August 1st, amounting to approximately $10,000 was also paid into this fund These amounts, together with interest on same,

reinsurance has been carried by the Wisconsin fund since 1923. Its maximum liability on a single risk is $1,000,000, coverage on the State Capitol being limited by law to $500,000 although the value is placed at $7,000,000.

A very serious shortcoming of the reinsurance plans lies in their failure to establish conservative limits upon the amount which the fund will cover at a given location. Even though the line retained on a single property may be restricted in the manner described, the concentration of a number of buildings at a particular place may give rise to a conflagration hazard capable of disrupting the fund since its shock can not be entirely averted by the reinsurance system. To illustrate, the Florida fund retains $864,740 of the $1,600,215 coverage on the University of Florida, $735,475 being reinsured; $771,201 of the $1,189,326 on the State Hospital at Chattahoochee, $418,125 being reinsured; and $658,925 of the $1,279,825 on the State College for Women at Tallahassee, $620,900 being reinsured The North Dakota fund retains $1,488,556 of the $1,818,568 on its State Hospital for Insane, reinsuring $330,013, $867,664 of the $1,459,845 on the State University at Grand Forks, reinsuring $592,182; and $737,899 of the $1,203,500 on the State Agricultural College, reinsuring $465,601.

Investments

Secured time deposits or bonds of the United States and Alabama are legal investments for the Alabama fund, bonds of the United States or county and municipal bonds of Florida for the Florida fund; and approved farm mortgages or Wisconsin municipal bonds for the Wisconsin fund. Receipts of the North Dakota fund are deposited at interest with the bank of North Dakota and South Carolina money is invested in the same types of securities as are legal for sinking funds of the state. Investments must be approved by the Governors of Alabama and Wisconsin

amounted to $35,473.43 up to December 31. No fire loss involving this fund has been experienced up to December 31.

"Should the fire losses continue to occur on small buildings only, this fund may increase to a point where it will be entirely adequate in protecting the Sinking Fund Commission against excessive individual losses. In the meantime we are continuing our efforts to secure desirable reinsurance protection."

State Liability for Solvency

Insofar as those funds covering state property only are concerned, the state must ultimately be responsible for any deficiency in the fund even though it should make no provision in the law for taking care of a shortage. The Alabama act has attempted to meet this contingency, however, by appropriating from the State Treasury $100,000 to be available only in case the loss by fire or tornado in any year during the accumulation of the fund shall exceed the premiums collected, "and then only in such amount as may be required to pay such loss in addition to the amount of funds on deposit at the time of said loss, less the amounts hereinafter set aside for the purpose of administration." When the fund has reached $500,000, the first surplus above that point must be used to reimburse the treasury for any sum drawn from this appropriation Similarly, the Florida act stipulates that in the event of a deficit, "there is hereby appropriated out of any funds in the General Revenue Fund not otherwise appropriated, a sum which, added to the sum then available in said State Fire Insurance Fund, shall be sufficient to pay the amount of the insurance due" Repayment of such amount must be made from subsequent premium earnings.

A provision of such a nature has more significance when property other than that belonging to the state is insured. The wording of the North Dakota act is peculiar in this respect as it provides that claims which can not be settled because the fund is deficient shall be payable 90 days after the termination of the next legislative session from any amount appropriated for that purpose, which amount shall subsequently be returned by the fund when it has acquired a sufficient surplus.[17] Nothing

[17] "However, if at any time sufficient funds are not available in the State Fire and Tornado Fund to cover any loss or damage sustained by fire or tornado, the person or board under whose supervision or charge such building or property might be, shall submit to the Commissioner of Insurance a claim for the amount of the adjustment of loss or damage, made by him, which claim, when approved by the Commissioner of Insurance, shall be by him submitted to the State Auditing Board, and if the State Auditing Board shall approve the same it shall make it payable ninety days after the end of the next session of the legislature, it shall bear interest at 5 per cent per annum, and the State Auditor shall, on the

is said in the South Carolina act regarding the state's responsibility for the fund's solvency but the Wisconsin law contains a clause quite similar to that of Florida As previously noted, the Wisconsin fund availed itself in 1903 and 1904 of the right to draw upon general state funds to pay fire losses but the amounts thus borrowed have since been returned No other fund has been obliged to resort to this aid.

ninetieth day succeeding the last day of the next session of the legislature, draw a warrant upon the State Treasurer, against any fund appropriated by such legislature for the purpose, payable to such person or board, as trustee for the State or political subdivision which they represent, in the amount of such claim with interest. Thereafter, whenever the State Fire and Tornado Fund shall have acquired a surplus sufficient to pay any or all of the claims paid out of such special funds of the State, the Commissioner of Insurance shall draw his warrants upon the State Treasurer against the State Fire and Tornado Fund, and deliver same to the State Treasurer, and the amount of said warrants shall be credited to the general fund of the State" Chapter 159 of the Session Laws of North Dakota for 1919 as amended by Senate Bill 112 for the year 1925, second paragraph of Section 8

CHAPTER XIV

LIFE INSURANCE FUNDS[1]

Creation of a life insurance fund by a Wisconsin act[2] of 1911 marked the entry of the state into direct competition with private insurance carriers Three years previous, it is true, the Massachusetts Savings Bank Life Insurance System had been introduced but this did not provide for a state fund in the strictest sense of the word. It enjoys a state subsidy, however, and has so many characteristics in common with state insurance generally as to warrant its consideration in a study of this kind. To avoid confusion of methods and principles, they will be discussed separately, that with the shorter life and smaller size being treated first, solely because it is a state fund in its essential nature

THE WISCONSIN FUND

Two years were granted by the legislature to place this fund in operation so that activities did not commence until 1913 Only a small volume of business was written that year and no appreciable gain has been made since. The total insurance in force did not reach $1,000,000 until 1927 and has always been considerably less than 1/10 of 1 per cent of the life insurance written in Wisconsin[3] by private companies. Accordingly,

[1] The information presented herein was obtained primarily through personal interviews with Miss Alice H. Grady, Deputy Commissioner in charge of the Massachusetts Savings Bank Life Insurance System, Boston; J. R. Lange, Associate Actuary, and J McCormick, Asst. Actuary of the Wisconsin Life Insurance Fund, Madison Printed material and miscellaneous data as well as correspondence with M. A. Freedy, Wisconsin Commissioner of Insurance, have contributed substantially, however

[2] Chapter 577, Laws of 1911.

[3] The total insurance in force in Wisconsin written by all carriers is compared below with that written by the State Fund at five year intervals since the Fund began to operate, and for 1926 Industrial and group insurance are not handled by the Fund but the figures for all carriers include such

On December 31	State Fund	All Carriers
1913	$146,400	$ 296,961,281
1915	289,600	402,721,579
1920	423,000	812,353,274
1925	743,800	1,439,805,283
1926	945,150	1,614,726,135

the fund has never been an important factor in competition. The reason lies primarily in its set-up and methods of operation and will become apparent as these are reviewed in the following pages.

Administration

General supervision of the fund rests with the Commissioner of Insurance although the State Treasurer is ex-officio treasurer and custodian An Audit Board, comprising the Attorney General, State Treasurer and Commissioner, certifies all losses and other payments to the Secretary of State for audit, whereas an Investment Board, composed of the same officials and the Secretary of State, passes on all investments made by the State Treasurer under the direction of the Insurance Commissioner. Applications for insurance are acted upon by the Commissioner in conjunction with the State Board of Health after a personal medical examination has been made by local doctors designated for that purpose

Manner of Securing Business

Only residents of the state or persons who are living within it at the time of applying for insurance are eligible, but the fund has no corps of agents to solicit them. Reliance is placed very largely upon voluntary inquiries although the fund has circularized some prospective purchasers by mail and has arranged with at least one savings bank to advertise the fund and solicit applications Rate schedules and forms are furnished to certain officials of counties, municipalities, etc and to state depositories, but practically all business comes by mail from applicants who know some friend that is thus insured. Any person transmitting an application may deduct a fee of 25 cents and 1 per cent of the premium The 1 per cent premium commission may also be deducted in remitting future premiums, and, like the 25 cent fee, may be retained by the policyholder in the event he pays directly to the fund. Premiums are payable annually, semi-annually or quarterly.

Types of Contracts

Six types of life insurance policies are in use—ordinary life, twenty-payment life, twenty year endowment, ten year endowment, endowment at 65 and term insurance to age 65 All are participating They are written for ages between 16 and 60 and in amounts from $500 to $4500. As the size of the fund increases, the maximum limit on the amount carried by one person may be increased, the law stipulating that it shall never exceed ½ of 1 per cent of the total amount at risk When the insurance in force warrants, the practice of the fund is to increase its maximum in units of $500 Authority to write annuities is granted to the fund but has not been exercised.

Digest of Policy Provisions

The contract form is shorter and simpler than those used by most old-line life insurance companies. Among the important features contained in it are: a disclaimer by the state for any liability beyond the amount of the fund itself, specific reservation to the insured of the right to change his beneficiary; payment of the proceeds to the insured's estate if there be no primary or contingent beneficiary surviving; a clause construing the policyholder's statements as representations, automatic premium loan, right to borrow at 6 per cent (withdrawal of money on loans may be deferred 60 days); options of taking cash, extended term insurance or a fractional paid-up policy upon surrender, after giving six months notice, based on full legal reserve without surrender charge, and the privilege of taking dividends in cash, applying them in payment of premiums or leaving them with the company at interest (5 per cent is now being paid).

Although a clause providing that if the age of the insured has been mis-stated, the amount payable should be such as the premiums paid would have purchased at the correct age, is inserted, there is no suicide or incontestable clause In lieu of the latter, the policyholder agrees to the following when making application: "that if any of the foregoing statements are untrue, and that if any matter intentionally misrepresented

shall increase the risk or contribute to my death occurring within one year of the date of the policy issued thereon, the benefit payable thereon shall be limited to the reserve at the time of death, and that for any intentional misrepresentation such policy may be cancelled during my lifetime upon payment to me of the reserve" Provisions with respect to a period of grace in paying premiums, assignment, disability, double indemnity, and payment of the proceeds in instalments rather than in a lump sum are also excluded

Basis for Net Rates and Reserves

The American Experience Table of Mortality and 3 per cent interest are employed in computing life insurance rates. Full legal reserves on this basis are held, the manner of ascertaining them being set forth, and emphasized in places, by the use of larger type in the policy form[4] Under the law, annuity premiums are to be based upon the British Offices Annuity Tables, 1893, with interest at 3 per cent.

Expenses and Loading

A three dollar fee is paid to the medical examiner if the applicant is accepted, otherwise, the applicant must bear this himself as he had to do in either case until a recent law amendment. The clerical expense of operating the fund, costs of making investments and adjusting losses, and miscellaneous items of printing, stationery, postage, express, etc must be paid by the fund There is no charge for office quarters or for the services of the Commissioner of Insurance, State Treasurer and other officials who superintend the fund's activities. Nor is there any acquisition expense unless the 1 per cent fee

[4] The wording of the reserve provision follows:
"A reserve shall be accumulated and held on this contract as herein provided From each annual premium shall be deducted the charge for expense, and the remaining net premium shall be credited to the insured and added to the reserve of the preceding year, if any Each year the insured shall be credited with interest on the total at 3 per cent per annum, and shall be charged with the cost of insurance, leaving the reserve Such cost of insurance shall provide for death claims for each year at the death rate indicated by the American Experience Table of Mortality, charged upon the difference between the amount of insurance and the reserve, on the plan of paying the amount of insurance at death from the reserve and the remainder from the costs of insurance for the year"

previously mentioned may be classed in that category. The fund is tax exempt.

The system prescribed by law for loading life policies is to add for "expenses and contingencies two dollars per year per thousand dollars of insurance, and an amount distributed equally through each of the possible premium payments, the present value of which shall be equal to one-sixth of the present value of the costs of insurance" By the expression "costs of insurance" is meant the tabular net cost, or, if an insurance contract is thought of as a combination of an increasing savings account and decreasing term protection, it is the cost of the decreasing protection, i e., the net amount at risk Inasmuch as the savings element increases and the pure protection decreases more rapidly in the higher premium plans of insurance, this method produces the very unusual result of adding a larger amount for expenses, both absolutely and relatively, to the lower premium forms at a given age than to those for which a more substantial amount is charged. At age 40 for instance,[5] the gross premium for ordinary life is $28 92, of which $4 17 constitutes the loading element, whereas that for 10 year endowment insurance is $92 73 but contains a loading charge of only $2 87. The manner specified for loading annuities is to add an amount "for expenses and contingencies, distributed equally through each of the premium payments, the present value of which shall be one-sixth of the net single premium for such annuity"

[5] A comparison of the premium rates on various types of policies and their loadings at different ages demonstrates that the example chosen is not extreme Rates are for $1,000 of insurance.

Age	Term to Age 65		Ordinary Life		20 Payment Life		10 Year Endowment	
	Gross Premium	Loading	Gross Premium	Loading	Gross Premium	Loading	Gross Premium	Loading
20	$14 23	$3 64	$17 84	$3 43	$26.93	$3.80	$91 24	$2.65
30	16 31	3 92	21 96	3 68	31.07	3 88	91 68	2.72
40	19 76	4 39	28 92	4 17	37.24	4 10	92.73	2.87
50	26 00	5.28	41.57	5 21	47 76	4 81	96 08	3.35

Comparative Rates

The fund does not publish a schedule showing the dividends paid at all different ages. In a recent pamphlet, however, the present scale of dividends for policies in force from 1 to 10 years is shown for age 30 on five different forms of policies together with the net cost each year. In determining the latter, the 25 cent application fee and the 1 per cent annual premium fee are deducted These figures are set forth under the heading " How the State Life Fund Insurance Saves You Money " with the qualification that the dividends are not guaranteed but that the net cost for the next ten years will be as indicated if that particular scale be maintained. If we accept these net rates as representative, which should involve no injustice to the fund since it publishes them to illustrate its low cost, it is of interest to compare with them similar data for private companies. For this purpose, the writer has selected three participating companies on the same reserve basis (American Experience Table of Mortality and 3 per cent interest) having the largest amount of ordinary insurance in force in Wisconsin. These are designated as A, B and C in Table XLVII.

A comparison of the rates for companies A, B and C on ordinary life, 20 payment life and 20 year endowment insurance policies with those for the fund indicate the average costs for ten years, assuming present dividend scales, would not be materially different

Service

Inasmuch as there are no agents to explain the coverage or fit it to the needs of the insured and no plan devised for adapting the payment of proceeds to the circumstances of the beneficiary, the policyholder is deprived of these and other collateral services without which private insurance companies could never have written the ninety billion dollars of life insurance now in force Acquisition costs are kept down by having each insured act as his own agent but the ineffectiveness of the plan, so directly opposed to the experience of private companies that " life insurance is sold and not bought," is evident in the small size of the fund The comparative growth of private insur-

TABLE XLVII

COST COMPARISONS

Wisconsin Life Fund and Three Leading Private Companies in Wisconsin on Same Reserve Basis

AGE 30

Net Costs per $1,000

Year	Net Cost	Ordinary Life				20 Payment Life				20 Year Endowment			
		Fund	Co A	Co B	Co C	Fund	Co A	Co B	Co C	Fund	Co A	Co B	Co C
1st	Gross Premium	$21 49	$23 31	$24 38	$24 38	$30 51	$33 44	$34 76	$34 76	$43 56	$49.57	$50 43	$50 43
2d .	G P—1st div.	17.39	16 14	[a]	16.79	26 35	25 70	[a]	26 14	39 33	40 92	[a]	40 99
3d .	G P.—2d div	16.85	15 94	[a]	16 52	25.85	25 35	[a]	25 71	38 62	40 36	[a]	40 34
4th .	G.P.—3d div.	16 27	15 72	[a]	16 24	25 10	24 99	[a]	25 28	37.76	39 77	[a]	39 67
5th.	G P.—4th div.	15 67	15 49	[a]	7 59	24 41	24 62	[a]	15 44	37 04	39 16	[a]	28 95
6th	G P—5th div.	15.03	15.26	[a]	15 75	23 69	24 23	[a]	24 48	36 16	38 53	[a]	38 36
7th.	G P—6th div	14 39	15 03	[a]	15 52	22 83	23 84	[a]	24.10	35 22	37.89	[a]	37 71
8th ..	G.P—7th div.	13 67	14 86	[a]	15 30	22 10	23.50	[a]	23.70	34 21	37 28	[a]	37 03
9th.	G P.—8th div	12 95	14 68	[a]	15 06	21 23	23 15	[a]	23.27	33 15	36 65	[a]	36 33
10th	G P.—9th div.	12.06	14 49	[a]	14 82	20 31	22.78	[a]	22.84	32 00	35 99	[a]	35 61
	Total—10 years	155 77	160 92	162 53	157 97	242 38	251 60	248 47	245 72	367 05	396 12	384 57	385 42
	Aver —10 yrs.	15 58	16 09	16.25	15 80	24.24	25 16	24 85	24.57	36.70	39.61	38 46	38 54

[a] Net cost for each year not shown in Flitcraft's Compendium (1927) from which private company figures were obtained.

ance within the same state demonstrates conclusively that middlemen perform a useful function for which policyholders are willing to pay.

Financial Status

On June 30, 1927, the total admitted assets of the fund were $204,171.61, distributed as follows: $109,300 in farm mortgages,[6] $44,367 in bonds, $15,553 in policy and premium loans, $26,433 in cash and the balance in accrued interest, due and deferred premiums and the excess of market over book value of bonds. A legal reserve of $171,095, dividends payable in 1927 of $5,006, dividends accrued and advance deposits of $2,761 constitute the liabilities, leaving a surplus[7] of $25,309. Dividends paid during the year preceding approximated 20 per cent of premium receipts.

Only 896 policies for a total face value of $1,039,150 were in force on June 30, 1927. The fund's experience has shown this number is not sufficient to insure a good distribution of risk and a stable loss ratio. Reinsurance is not carried nor ceded.

No State Liability

The first sentence of the statute creating the fund and the first sentence of each contract issued specifically assert there is no liability on the part of the state "beyond the amount of the fund"

Massachusetts Savings Bank Life Insurance System

Sponsored by Louis D. Brandeis, now Associate Justice of the United States Supreme Court, an act[8] was passed by the

[6] Under Sec 2 of the law, preference must be given when making investments to applications for small loans on improved farm property and to applications for loans to farmers and cooperative associations.

[7] The creation of a surplus is governed by the following provision of law:

"A surplus shall be set aside from the net profits on each policy which shall be made up on the following basis fifty per cent during the first policy year, and thereafter five per cent less for each succeeding policy year until the ninth year, and thereafter the amount so set apart shall be ten per cent The interest thereon shall also be set apart into such surplus. Such surplus fund shall be maintained and held to meet losses from unexpected or great mortality or depreciation in securities or otherwise. The balance of the net profits shall be distributed annually among the holders of policies and shall be payable on demand or be applied to the premium next payable." Chapter 210 05, Sec 9

[8] Chapter 178, Laws of 1907, subsequently amended

Massachusetts Legislature at its 1907 session creating what is known as the Massachusetts Savings Bank Life Insurance System Its fundamental idea was to have savings banks (purely mutual institutions in Massachusetts), which could meet certain qualifications, organize departments to write life insurance contracts under state supervision and guidance with the aim of supplying Massachusetts' working classes with life insurance at the lowest possible cost. The combination of private initiative and operation (as represented by the banks) with public general administrative control has produced a system which can not logically be classified either as a state fund or as a private carrier. Its exclusion from a survey of this nature could hardly be justified, however, because of the peculiar rôle played by the state.

Administration

The system is operated under the direction of a body corporate known as the General Insurance Guaranty Fund. This body is composed of seven trustees appointed by the Governor for seven year terms, one retiring each year. Trustees serve without compensation and are selected from trustees of savings banks or of savings banks with insurance departments. One of the seven is designated by the Governor to act as Commissioner of Savings Bank Life Insurance but the administrative officer in charge is a Deputy Commissioner appointed by the trustees with the approval of the Governor and Council. A State Actuary computes the rates which may be charged, prepares, with the advice of the Attorney General, policy forms to be used, makes an annual valuation of the contracts in force and advises the various banks what dividends they may safely pay. A State Medical Director, subject to the supervision and control of the Commissioner of Insurance, establishes the rules relating to the acceptability of the applicant, appoints the local examining physicians and advises the banks whether to accept or reject a risk. State instructors solicit applications. The investment of assets, except those belonging to the General Insurance Guaranty Fund, as well as other administrative

functions connected with the actual issuance of policies and receipt of premiums, is reserved to the banks.

Qualifications for Establishment of Insurance Department

A certificate permitting a savings bank to establish an insurance department must be secured from the Commissioner of Banks and Commissioner of Insurance, acting jointly. In order to qualify for this, the bank must be in satisfactory financial condition and provide (1) a special expense guaranty fund of not less than five thousand dollars, and (2) either a special insurance guaranty fund of not less than twenty thousand dollars, or a guaranty contract. The aim of these special funds was to avert the criticism of savings bank depositors who might feel their savings would be imperilled by the bank's entry into this field They have been advanced ordinarily by trustees of the banks, bear interest at the average rate paid to savings bank depositors and may be repaid as soon as the surplus warrants. The guaranty contract acceptable as an alternative to the special insurance guaranty fund may be obtained from the General Insurance Guaranty Fund whenever the balance held by it is sufficient. In other words, the trustees of the General Insurance Guaranty Fund "enter into a contract with any savings bank desiring to establish an insurance department to guarantee all the risks of such bank until such time as it shall have a surplus of not less than twenty thousand dollars nor less than ten per cent of the aggregate insurance reserve." This General Insurance Guaranty Fund has been built up from assessments of 4 per cent upon all premiums received by the banks, and is intended to be used for preventing any impairment of their insurance reserves. The law contemplated continuing assessments until the fund should exceed $100,000 or 5 per cent of the aggregate outstanding insurance reserve Receipts are invested in Liberty Bonds or deposited in savings banks The trustees, with the approval of the Commissioner of Insurance, discontinued assessments a number of years ago It has never been necessary to draw against this Fund, or special contingency reserve, as it might be called. Ten banks have opened insurance departments to date Only

the first four of these were obliged to set up special insurance guaranty funds as the others received guaranty contracts without charge from the General Insurance Guaranty Fund, this practice being started in 1922

Manner of Securing Business

"Savings and insurance banks shall not employ solicitors of insurance, and shall not employ persons to make house to house collections of premiums; but the trustees may establish such agencies and means for the receipt of applications for insurance of deposits and of premium and annuity payments, at such convenient places and times, of such nature and upon such terms as the Commissioner of Banks and the Commissioner of Insurance may approve. The trustees may also, with like approval, appoint any savings bank, or savings and insurance bank, its agent to make, so far as thereunto authorized, payments due on policies of insurance and on contracts for annuities, and to perform other services for the insurance department. All savings banks and all savings and insurance banks may, with like approval, act as such agents" In such words did the law prevent establishment of an agency force to sell insurance. As a substitute, the state employs two salaried "instructors," as they are called, who, by means of addresses before meetings of factory employees, solicitation of individual workers and talks before luncheon clubs, sell insurance. By securing the endorsement of employers and gaining their consent to having workmen interviewed while on the job,[9] these in-

[9] The wording of an 11" x 17" poster furnished employers to be displayed prior to the visit of an instructor reads as follows.

NOTICE
A Representative of MASSACHUSETTS
SAVINGS BANK LIFE INSURANCE
will be at the Factory . . . .

If you want information or are thinking of taking out a policy—this is an opportunity for you to learn about this system which is providing the
BEST INSURANCE AT LOWEST COST
For All Residents of Massachusetts

Policies Are Now Issued at All Ages from *One* to *Sixty-Five* Years
Speak to your foreman or to . . . . . . if you are interested

structors have secured applications for a substantial amount of insurance. They also assist in organizing mutual aid associations Besides the ten banks with insurance departments, 95 savings banks have established agencies for the receipt of applications and the transmission of premiums. Arrangements may be made by policyholders with these savings banks or with their employers to have premiums deducted from their accounts or from their wages and remitted to the insurance banks. For this service they receive a fee equal to 2 per cent of the premium on life insurance and deferred annuity contracts and ½ of 1 per cent on immediate annuity contracts.

Types of Contracts

Ordinary insurance with premiums payable annually, semi-annually or quarterly may be obtained between ages 15 and 70 on the straight life, 20 payment life or 20 year endowment insurance plan, in amounts ranging from $250 to $10,000 No single bank can write more than $1,000 on any life so to get the maximum it would be necessary to take a policy with each of the ten banks Monthly premium policies on straight life (paid up at age 75), endowment at 65 and 20 year endowment forms may be secured between ages 10 and 65 in amounts from $50 to $400. Monthly payment infantile policies for ages 1 to 9 are also issued. A ten-year savings-insurance plan, combining an insurance policy with a savings account to accumulate $1,000 in ten years, and a "One Dollar a Week Plan," combining $1,000 of insurance with a savings bank account, are special features offered by the system Deferred or immediate annuities are written for a maximum of $2,000 yearly income ($200 for any one bank).

In addition to the individual contracts outlined, group life insurance coverage may be secured on the lives of employees. Group accident and health insurance is not issued but aid is given to employers in organizing mutual benefit associations among industrial workers for voluntary protection against sickness.

Only residents of Massachusetts or persons regularly em-

ployed in the state are eligible for any of the coverages enumerated

Policy Provisions

The contract provisions are liberal and differ little from those of private companies. Surrender values are available on all life contracts after they have been in force six months. Disability benefits are obtainable under the group contract only. There are no multiple indemnity features.

Basis for Net Rates and Reserves

The basis for calculating life insurance rates is the American Experience Table of Mortality and 3½ per cent interest for ordinary forms and the Standard Industrial Mortality Table with 3½ per cent interest for the monthly premium types. McClintock's Annuitant Tables and 4 per cent interest are used for computing annuity rates. Full legal reserves are held. A surrender charge not to exceed 1 per cent may be retained in case of lapsation.

Expenses and Loading

Including the Deputy Commissioner, State Actuary and State Medical Director, there is a salaried staff of fourteen persons employed and paid by the state in the Savings Bank Life Insurance Division The state appropriation likewise covers publicity costs and until recently included blanks for policies, applications, schedules and other papers and books which the State Actuary prepares On the average, the cost to the state for the past five years has been about $32,000 annually This does not include a charge for quarters supplied to the Division in the State House. Funds held by the various insurance banks as part of their insurance reserve or surplus and the General Insurance Guaranty Fund are subject to the same taxation as savings deposits, but are exempted from the fees and taxes assessed upon life insurance companies. The taxes paid by the system as a whole are substantially less [10]

[10] Private carriers are subject to an excise tax of ¼ of 1 per cent upon the net values of policies on the lives of residents In addition, they must pay a fee for filing their annual statement, an annual license fee of $2

than those paid by private carriers and are by no means sufficient to reimburse the state for its appropriations.

The medical examination fee,[11] the 2 per cent collection fee (½ of 1 per cent on immediate annuities) and all other costs of administering the system are borne by the banks. Expenses pertaining to the conduct of both the savings department and insurance department of a bank are pro-rated equitably between them

Although it yields a larger amount for expenses than is necessary, the method of loading originally adopted has been retained in order not to cause any disturbance in the minds of policyholders with regard to their gross rate. The excess is returned in the form of dividends.

Comparative Rates

All contracts (both life and annuity) issued by the banks are participating, and dividends are paid on them according to law after provision has been made for a statutory surplus.[12] Dividend schedules are drawn up by the State Actuary which the banks in practice adopt although they have the legal right

for each agent, a charge for examination of the company and any retaliatory taxes or fees which may be imposed because of greater taxes, licenses or fees charged by the states in which they are incorporated. The legal reserve for all ten banks was $4,141,716 on October 31, 1926 and $5,019,794 on October 31, 1927. Had the excise tax above mentioned been levied on these amounts, it alone would have yielded over $10,000 the first year and $12,500 the second Total taxes paid by the entire system aggregated $3,900 in 1926 and $5,500 in 1927.

[11] Since the maximum limit assumed by any bank is $1,000 on life contracts, a separate application must be made for each $1,000 of protection desired The medical examination fee is $2 50 for one application and $4 for more than one, irrespective of the number No examination is required, of course, for annuities.

[12] The portion of the law applicable to this reads

"Section 21 SURPLUS 1922; 79 Each savings and insurance bank shall annually set apart as a surplus from the net profits, if any, which have been earned in its insurance department, an amount of not less than twenty nor more than seventy-five per cent thereof, until such fund equals ten per cent of its net insurance reserve, or the amount of its special insurance guaranty fund, whichever is the greater Thereafter each such bank may add in any year to its said surplus fund not more than fifteen per cent of the net profits, if any, which have been earned in its insurance department in such year; provided, that no such bank shall so add to its said surplus fund if it equals ten per cent of the net insurance reserve of said bank Such surplus fund shall thereafter be maintained and held or used so far as necessary to meet losses in its insurance department whether from unexpectedly great mortality, depreciation in its securities, or otherwise, and for the maintenance of a stable dividend scale. The balance of the net profits shall annually be distributed . . ."

to make their own. In 1926, the first six banks to organize insurance departments were using the same dividend scale and the other four a scale 25 per cent lower. Group policyholders have all been paid the same dividend, at the rate of 30 per cent, since 1923.

As a result of the substantial dividends being paid, it is asserted [13] that the net cost of savings bank life insurance averages "twenty-three per cent less than that in the commercial life insurance companies on their ordinary business, and fifty per cent less than weekly premium insurance in the industrial companies." The reasons advanced in a recent publication [14] to account for such differences are:

> "First. Because the Savings Banks are not permitted to employ solicitors, all the instruction work being done by the State, so that no part of the money paid by the policyholders is spent for agents' commissions
>
> "Second. Because the state provides free actuarial service for all savings insurance banks, and also other overhead administrative service. The State also furnishes all policy forms used (As a result of an amendment to the law in 1927, the banks must now pay for their blanks and books)
>
> "Third Because under the Savings Bank Insurance Law, all the net profits of the business over and above a certain specified contribution to surplus must be returned to policyholders in the form of dividends."

Rate comparisons, on the basis of the 1926 dividend scales, published by the State Savings Bank Life Insurance Division, seem to bear out this contention that net rates of banks are generally lower than those of private companies on ordinary business but likewise indicate there is less difference in some cases than in others This comparison appears to be fair but the same can hardly be said of the comparison between the rates of the banks on monthly premium contracts with those of private carriers on industrial insurance policies. Premiums on the former are paid at a bank agency or deducted by the employer whereas those of the latter are collected weekly by agents who go from door to door, the payment plan being one of the out-

[13] Leaflet published by the Savings Bank Life Insurance Division, dated January 16, 1928

[14] Pamphlet entitled "Massachusetts Savings Bank Life Insurance," by Alice H Grady, Deputy Commissioner, 1926.

standing characteristics of this form of coverage and arising from the necessities of policyholders.

Since many private carriers are participating, the net profits they earn likewise are returned eventually to policyholders. Generally speaking, therefore, any difference in net rates must be attributed to direct state aid, indirect subsidization through lower taxes and savings in acquisition costs.

Service

The importance of the agent in educating the public to the beneficent power of life insurance can not be overemphasized. Natural inertia and procrastination, ignorance and prejudice, must be overcome, and this can best be done by personal contact. Adaptation of coverage to needs of the insured, proper designation of beneficiaries and adaptation of settlement plans to their circumstances, necessitate competent advice, not only at the time a policy is issued, but constantly throughout its existence. The prospective purchaser does not voluntarily request this in most cases. He must ordinarily be sought out and convinced of the place which life insurance should hold in his personal or business financial program. An agency force has proved to be the one means by which this can be effectively accomplished No better demonstration of the influence exerted by the personal element can be found than in the Massachusetts system itself. In spite of its lower net rates and of its having 105 agency banks to receive applications and premiums, the two state "instructors" wrote practically one-half of the new business in 1926

Furthermore, though the system has enjoyed a steady growth, the total amount of insurance in force is less than 1¼ per cent of that for private companies.[15] Even here the ques-

[15] A comparison of the relative growth of insurance in force for the Savings Bank System as compared with the amount of insurance in force in Massachusetts for all carriers may be obtained from the following figures.

Year	All Savings Banks	All Carriers
1910	$ 1,367,363	$ 894,542,543
1915 ...	4,341,205	1,160,188,542
1920	15,050,271	2,026,748,823
1925.. .	38,105,250	3,310,821,143
1926 . ..	43,293,286	3,607,430,429

tion may well be raised as to whether the selling and educational activities conducted by private companies and their agents have not created in many persons a receptive frame of mind and thus been indirectly responsible for much of the business written by the banks. It seems not unreasonable to assume that such a system might thrive where agency companies are strong and aggressive but that it could ever attain the success achieved by the agency method may well be doubted. With human beings constituted as they are, and with public knowledge of insurance limited as it is, some acquisition expense is inevitable if life insurance is to be extended to all those who may benefit from it.

Many life insurance companies are now offering free periodic physical examinations to their ordinary policyholders and free nursing service, health literature and other life conservation aids to group and industrial policyholders They have cooperated in carrying on medical research, community health and safety programs, campaigns for legislation which will better hygienic and living conditions and in numerous other ways have endeavored to lengthen the human life span. Results achieved have confirmed the soundness of their aims and efforts. Such services were not contemplated by the Massachusetts System nor have they been attempted.

Financial Status

The total ledger assets of the system were $5,843,323 on October 31, 1927, to which must be added accrued interest of $66,105, deferred and uncollected premiums of $220,125, and excess of market value of securities [16] over book value of $71,837. A legal reserve of $5,019,794, a reserve for unpaid death claims of $19,973, apportioned dividends of $550,601 and other liabilities of $54,647 leave a surplus of $556,375 remaining after their deduction. The surplus figure includes

Figures are taken as of October 31 for the savings banks and December 31 for others The insurance in force for all carriers on December 31, 1926 consisted of $2,425,388,473 of ordinary, $943,110,557 of weekly premium, and $238,931,399 of group insurance, whereas on October 31 of the same year, the savings banks total included $32,594,036 of ordinary and $10,699,250 of group business.

[16] Legal investments for the insurance departments of the banks are the same as for the savings branches

the General Insurance Guaranty Fund of approximately $140,000 which is liable for the obligations incurred by any bank. Policies numbering 61,543 and having a face value of $49,171,745 were in force on October 31, 1927 The premium income received for the year preceding was $1,583,746.

Reinsurance with private companies is not carried nor ceded but the same result is accomplished as between the banks by a plan for unifying mortality In brief, it provides that the loss ratio for all the banks combined shall be ascertained and that each individual bank shall pay to or receive from the General Insurance Guaranty Fund any amount which results from the divergence of its particular mortality ratio from the average.[17] Dividends are not unified in the same manner, although, as heretofore noted, there is a tendency for all banks to use the same scale.

No State Liability

A clause is incorporated in the contract forms which are used stating that the assets of the insurance department of the issuing bank and of the General Insurance Guaranty Fund are liable for any obligations incurred by the bank on account of such contract. Assets of the savings department of the bank are not liable Nothing is stated either in the law or the contracts with respect to the state's responsibility for the solvency of the system but the administrative head of the State Division asserts the state has assumed no legal liability for this.

[17] Excerpt from Section 15, of the law, describing the duties of the State Actuary "The state actuary shall for each year ending October thirty-first determine the ratio of actual to expected mortality claims for all of the savings and insurance banks combined, and shall determine a similar ratio for each of the savings and insurance banks separately Both calculations shall be based upon the mortality tables and the rate of interest used by the banks in the calculation of the premiums, or upon such other bases as shall be approved by the commissioner of insurance. If the calculation of the ratio pertaining to any savings and insurance bank shows that the actual mortality experience is less than the mortality expected to be experienced by all of the banks combined, the state actuary shall send to such bank a certificate setting forth the amount of such difference, and thereupon such bank shall send to the General Insurance Guaranty Fund in cash the amount of such certificate. The state actuary shall also furnish to the trustees of the General Insurance Guaranty Fund a certificate in respect to any savings and insurance bank in which the ratio of the actual to the expected mortality has exceeded the ratio of the actual to the expected mortality for all of the banks combined, and thereupon the Trustees of the General Insurance Guaranty Fund shall pay to such bank the amount of such excess as evidenced by such certificate"

CHAPTER XV

OTHER FUNDS

The most important insurance funds operated by the various states have been described in the preceding chapters. Those of lesser significance are presented herein. So far as the author has been able to ascertain after extended research,[1] these conclude the roll of insurance enterprises in which the states of this country have engaged.

TORRENS TITLE INSURANCE FUNDS [2]

As a means of facilitating the registration and transfer of land, nineteen [3] states have adopted Torrens title laws. All are

[1] Besides visiting 37 states in the course of this survey, interviewing commissioners of insurance, miscellaneous state officials and numerous insurance men, the writer further checked his findings by correspondence with the insurance commissioner, the commissioner of banks, the secretary of state and the superintendent of public instruction (or official holding like position), of every state in the Union He was unable to learn of any state insurance fund other than those reviewed in this volume

[2] The author makes no claim as to originality for the material contained in this section On the contrary, he acknowledges his indebtedness to a thesis by Edward Lawrence McKenna, entitled " State Insurance of Land Titles in the United States (The Torrens System) " published in 1925. Dr McKenna's research covered the various aspects of these funds so thoroughly, the writer felt that further detailed inquiry would be objectless. All material presented in quotations in this section was abstracted from it.

In order to ascertain whether any additional Torrens laws had been adopted subsequent to the appearance of this treatise and likewise to learn if any change had taken place in the general status of the funds created by this legislation, a letter was addressed to the Secretary of State of each state in the Union The replies modified Dr McKenna's presentation and conclusions in no respect The reader intent upon pursuing the subject further is referred to the source mentioned

[3] A list of the states having the Torrens system together with the dates of adoption follows

Illinois	1897	Ohio	1913
California	1897	Mississippi	1913
Massachusetts	1898	Nebraska	1915
Minnesota	1901	Virginia	1916
Oregon	1901	South Carolina	1916
Colorado	1903	Georgia	1917
Washington	1907	Tennessee	1917
New York	1908	North Dakota	1917
North Carolina	1913	South Dakota	1917
Utah	1917		

optional in form. The general purposes are three-fold: "(1) To certify by governmental authority to the ownership of an indefeasible, or at least of a guaranteed title to land. (2) To simplify and cheapen the transfer of land. (3) To compensate by means of an insurance or indemnity fund anyone who may suffer unjustly through the operation of the system."[4] The latter purpose is the one with which this survey is especially concerned but since the insurance fund is an integral part of the whole Torrens system, a brief resume of the manner in which the system operates is first in order.

An owner of land who wishes to have his title registered applies to the court designated in the act. In his application he furnishes the information required by law as to description of the land and all encumbrances or claims against it, together with the names and addresses of persons holding same. The latter are regarded as defendants in the suit which the applicant is thus initiating, and are summoned in the manner prescribed in the act

After an examiner appointed by the court has reported on the proofs of title, including an abstract or survey if the examiner deems necessary, and a hearing has been given to any person who appears in opposition, the court may order registration if satisfied that the petitioner has proper title. A certificate is then issued which becomes indefeasible[5] after a speci-

[4] Dr. McKenna further states "To these, a fourth object might be added, namely, to remove technical defects in titles which are good as a matter of fact, but where some apparent cloud on title exists which makes private insurers reluctant to pass upon the matter without the authority of a judicial pronouncement as to the validity of the outstanding claims"

[5] As respects the finality or indefeasibility of the Torrens certificate, Dr. McKenna writes: "There has been much discussion concerning the finality of the registered title An honest difference of opinion appears to have existed, and appears still to exist, concerning this matter Conclusiveness, or finality is of importance for two reasons. first, as it affects the security of the certificate itself at a particular time, and second, insofar as it affects subsequent search If the certificate is final, no such search is necessary; if it is not final, and if some preliminary search must be made upon transfer of the certificate, a considerable advantage claimed for the system would seem to be lost"

In concluding the discussion as to the security of the Torrens certificate, he further states: "The Torrens certificate is apparently granted under laws which are constitutional and under authorized procedure The certificate is open to court review in a great number of instances It is indefinitely open to court review unless the period of limitation of action mentioned in the law is capable of construction as a general statute of limitations."

fied time (usually ranging from 90 days to 2 years) has elapsed.

Since the purpose of the system is to guarantee the absolute character of the certificate, an insurance fund is created to indemnify any person who may subsequently appear and prove an interest in the land In the words of the writer previously cited " it is not a system of direct insurance to title holders, but rather of indirect insurance, that is to say, the plan is to perpetuate titles in certificate holders and to compensate those whose claims are equal or superior to those of certificate holders, out of a fund created by registrants " Subsequent attention will be confined to the operation of these funds

Administration

The assessments levied at the time of registration are paid to the county registrar or similar official and then turned over to the county or state treasurer who retains custody of them Approved forms of investment are stipulated in the various laws

Nature of Coverage

A person injured by operation of the law may resort to the fund only after he " has exhausted all other remedies or more specifically after judgments against co-defendants other than county authorities have been returned unsatisfied " The time limit within which action must be commenced varies in different states from 2 to 10 years, although 6 years is most common. The basis for measuring damages is the market value of the property at the time the right of action accrued, no allowance being made for interest, accretions in value or costs of actions instituted in order to comply with the provision of the law requiring that all other remedies must be exhausted.

The Premium Basis

In addition to fees payable to the clerk of the court and to the registrar, a premium of 1/10 of 1 per cent of the value of the property registered is charged, which is transferred to the insurance fund. The value accepted as the basis for contribu-

tion is not always determined in the same way. It may, for instance, include or exclude improvements to the land, be based on the amount upon which taxes are assessed or be fixed by the registrar or the court. Obviously, such a variation in method raises the question of equity. Maximum limits upon the size of the fund to be accumulated from these payments is contemplated by some of the laws. "In Massachusetts the estimated figure is $200,000, in Ohio it is $300,000; in Virginia, Georgia and Utah, $500,000." No fund has yet reached the stipulated limit

Comparative Costs

Eliminating nine states where a comparison of rates is of no practical significance since the system is little used, Dr. McKenna found "In two states the cost appears to be the same for private abstracting as for registering titles In three states the cost of the Torrens registration is less than the regular costs would be In five states the cost of registration under the Torrens laws is greater than the private system of examination." He further adds:

> "If the Torrens system is really cheap and really secure, the landholders of nine states are neglecting a source of economy for in those states there is practically no use of the system Further, if the system is really cheap, and really secure, most land-owners in the states where the system has been most successful are neglecting a source of economy. In no state is even as much as 10 per cent of the land registered The growth in registration in most states is neither regular nor steady The hypothesis might conceivably be advanced that the Torrens system in the ordinary case is employed by those who have a particular purpose in view—subdivision, and clouded titles. Once these titles are registered, the bulk of the business is done and the Torrens system lapses into disuse, except for whatever sporadic growth may follow vigorous advertising"

Financial Status

The receipts of all funds have been relatively small as less than 5 per cent of the property in all nineteen states combined has been registered Massachusetts and Illinois have evidenced the greatest activity, but even after both of these funds had been in operation twenty-three years, their balances were

$126,728 and $61,327 respectively The balances of some funds are practically negligible but so far as the writer knows, none shows a deficit. For the system of Torrens registration taken as a whole, a comparison of fiscal cost with fiscal income "leads inevitably to the belief that the Torrens system is an expense to the state"

State Liability for Solvency

In at least four states—Massachusetts, Mississippi, North and South Carolina—the law provides that payment shall be made from the State treasury in case the fund is deficient, and in two others—Illinois and Nebraska—the county is apparently responsible A large number of the acts stipulate that unpaid amounts shall draw interest until the balance in the fund is sufficient to absorb them

Unquestionably, injured parties should be given some redress when title to property in which they have a valid interest is vested in someone else under the action of a Torrens law, and it seems logical that the state which has thus deprived them of their rights should guarantee indemnity to them.

In General

Excerpts from the thesis already profusely quoted summarize so tersely the insurance features and the probable future status of this legislation that they have been borrowed in toto.

"*Summary of Insurance Clauses of the Laws.*—Considering the insurance features of the Torrens laws then it would appear: (*a*) That the laws are not uniform as to coverage and that their statements as to coverage are not self-interpreting, (*b*) that the basis of the contribution to the fund should be readjusted or at least should be considered in several connotations—solvency, discrimination, the possible use of the fund for public purposes; (*c*) that the provisions as to the exhaustion of other remedies are at the best to be regarded as an unfortunate necessity, and seem to be extremely dubious if this necessity be not granted, (*d*) that the measure of damages is unfair and should be readjusted; (*e*) that the state or county having adopted the principle of title registration, should in all cases guarantee the fund."

"*Conclusions as to the Future Status of the Torrens System.*—The future status of the Torrens system is a subject for conjecture The system is at present unsuccessful. It will never be more so until it attracts new registrants. Its prospect for doing so by compulsion may

be dismissed Its occasional practice of retaining present registrants by refusing the right to withdraw is open to much objection. Lowering of cost of original registration might attract such registrants although it is impossible to say whether this would be the case or not. In the event that the Torrens system becomes general it is possible that there will be a financial saving to the state in the elimination of duplicate records but it is not likely that there will be such savings. The saving in search is no real saving except so far as duplicate searches are saved. Otherwise, the labor in the one case is the same as in the other. The interest of the general taxpayer in the Torrens system is remote Until the Torrens system is shown to have a wider general appeal than that which it now makes to two special classes: holders of flawed titles and to owners of large plots who plan subdivision, no optimistic conclusion can be reached concerning its future scope or usefulness."

Public Official Bonding Funds [6]

Another field of insurance into which but two states have thus far ventured is the bonding of public officials North Dakota's act was passed in 1915 [7] and South Dakota's in 1919. Each provided for the creation of a fund to bond all officials of the state and its political subdivisions who do not furnish personal surety when taking office. They are practically monopolistic in character since public money may not be used [8] to purchase corporate surety bonds from private carriers although a public official who desires to submit such security may do so at his own expense. Both funds are administered by the Insurance Commissioners of their respective states, there being

[6] Information contained in this chapter is based upon material supplied personally by S A. Olsness, North Dakota Commissioner of Insurance and through correspondence, by G H Helgerson, South Dakota Commissioner of Insurance This has been supplemented by reports and miscellaneous material.

[7] The North Dakota legislature passed a law in 1913 providing for a competitive public official bonding fund This was declared unconstitutional and another measure enacted in 1915, but pending Supreme Court action on its constitutionality, operations were not begun until January 1, 1918 Some objectionable features of that act were eliminated by the 1919 legislature.

[8] An exception to this exists in North Dakota "for such bonds as are required to replace insurance by the Commissioner or to cover the excess over the amount carried in the State Bonding Fund" In South Dakota "the balance of any bond in excess of twenty-five thousand dollars required to be furnished by any officer or any employee shall be in the form of personal security or written by a surety company authorized to transact business in this state" When sureties other than the state fund are on the risk, the principle of contribution is applied in paying losses.

in North Dakota, however, a manager acting under the supervision of that official.

Nature of Coverage

On or before the time any public employee in North Dakota is scheduled to take office, the state, county, township, municipal or school official, particularly charged with that responsibility, must certify to the Insurance Commissioner the election or appointment of the employee and the amount of bond required, and remit for the premium Failure to make such report and pay premium within ten days after the employee's service has begun renders the party who should have made the report liable as a personal surety on the new official's bond No policy is issued, the provisions of the bonding fund act, and of any statute obliging public officials to be bonded, constituting the entire contract. The coverage specified in the law, however, is that "the condition of such bond shall be that such public employee as principal, shall faithfully and impartially discharge and perform the duties of his said office of employment including such duties as are or may be imposed upon him by law, and shall render a true account of all moneys and property of every kind that shall come into his hands as such employee, and pay over and deliver the same according to law."[9] Application to the South Dakota fund must be made on approved forms in which information similar to that required by private companies is set forth. The wording of the contract itself is not contained in the law but is to be "determined by the Commissioner of Insurance, by and with the advice and aid of the Attorney General, and with the approval of the Governor." Although different forms are employed for state, county, township or other officials, the covenant of the fund is in every case the same, stating that the fund shall be held responsible if the bonded official does not "faithfully and impartially discharge the duties of his office of ... . and render a true account of all moneys, accounts, and property of any kind that shall come into his hands as such officer, and pay over and deliver the same according to law."

[9] Chapter 158, Laws of 1919, Section 6

Investigation and Cancellation Features

If the North Dakota Commissioner of Insurance is of the opinion that the interests of the fund are jeopardized by the misconduct or inefficiency of any public employee, he must make an examination or request the state examiner to do so, and if necessary, cause an action for accounting to be instituted in order that the employee may be required to make a complete disclosure of his activities while an incumbent in office. Should he deem it advisable, he may request the Governor to make an investigation for the purpose of removing any defaulting official or any other who conducts the affairs of his office so as to endanger the fund. Cancellation of coverage by the Commissioner is permissible upon giving thirty days written notice, but an appeal may be brought within twenty days after receipt of such, before the judge of the judicial district within which the employee resides.

The South Dakota statute is somewhat more flexible as the Commissioner may at any time request a bonded employee to furnish information relative to his official acts or duties, disposition of funds, property, etc and may require the Executive Accountant to examine into the records and affairs of said official. Furthermore, he is vested with full power to require collateral security in the same manner and to the same extent as required by privately operated surety companies The right to reject an application is specifically granted to this fund whereas in North Dakota coverage is automatic Only ten days written notice of cancellation need be given but the Commissioner must obtain the approval of the Governor before taking such action. Both funds provide for examining accounts of defaulting employees and for subrogation upon payment of losses.

Rates and Limits of Coverage

The rate of premium is fixed in both laws at 25 cents per $100 which is the same as that charged by private companies. There is no limit to the size of the bond which the North

Dakota fund may write but any amount in excess of $25,000 may be, and now is, reinsured.[10] The maximum in South Dakota is $25,000 and there is no provision for reinsurance If a particular official has to furnish a larger bond than this, the extra amount must be secured from a personal or corporate surety As soon as the fund reaches $100,000 in South Dakota, premiums are to cease until it drops below that sum. Neither fund pays dividends.

Expenses

The South Dakota fund is handled by the State Insurance Department proper without any additional help, hence no expense for running it is charged against receipts except for stationery and supplies. This amounted to $6 42 in 1926 Quarters are furnished free to the North Dakota fund but other expenses are borne from premiums The law restricts expense disbursements to 10 per cent of the fund's receipts in any one calendar year, but the ratios of operating costs to gross income—5.8 per cent in 1919, 5 4 per cent in 1920, 9 7 per cent in 1921, 9 0 per cent in 1922, 14 9 per cent in 1923, 12.5 per cent in 1924, 18 9 per cent in 1925 and 15 6 per cent for 8 months of 1926—indicate this provision has been consistently violated in recent years This violation was primarily caused by the necessity for fighting claims and is justified by the fund

[10] "In the beginning the Department was unable to secure reinsurance with old line bonding companies, because of their objection to certain features of the law However, the Manager finally succeeded in placing reinsurance with North Dakota Bond companies At present it is all written with the Northern Trust Company of Fargo, and by them reinsured in other North Dakota companies.

"The Bonding Fund is recognized by other bonding companies as a company and is given the same consideration in the matter of reinsurance as one old line company gives another in this respect. The Fund receives a commission, or discount, of 20 per cent on all reinsurance placed This results in a handling profit, gross, of fifty cents per thousand of bonds reinsured over the limit of twenty-five thousand carried net by the Bonding Fund. The rate charged for bonds is $2 50 per thousand per annum Since the Department has been able to protect itself by reinsurance, there has been no claim against it in excess of the net retention specified by law During the time it was impossible to secure reinsurance from outside companies there occurred the loss in Slope County where the Fund lost $56,000 Had reinsurance been in force at that time it would have resulted in a clear saving of $31,000 to the State Fund"—1926 Report of State Bonding Department, page 46

on the grounds of expediency.[11] Both funds are exempt from taxation

Claims—Prevention and Handling

Little effort has been made by the funds to supervise bonded employees, check up on the accounting systems they employ, ascertain whether they are properly protected with depository bonds from their banks or to take other steps designed to prevent loss. This neglect has been reflected in a low expense ratio, it is true, but the omission, particularly, to safeguard themselves by making certain that bonded employees have complied with the state laws[12] requiring public deposits to be

[11] Excerpt from letter dated December 28th, 1926, from Harold Hopton, Manager of North Dakota Bonding Fund.

"In reply to the third paragraph of your letter in which you state that there is no provision in the law for adjusting the excess charges and operating expenses, this matter has been called to the attention of the Legislature. Up to this date, however, the Legislature has not seen fit to make any adjustment and in view of the financial circumstances the last few years, we believe it is our duty to safeguard the department which has correspondingly increased the operating expense."

[12] The present depository law of North Dakota, Chapter 199, Session Laws of 1923, limits the amount to be deposited in any designated depository to the amount of depository bonds furnished by the bank with the further restriction that in no case shall the amount deposited in any bank exceed 100 per cent (50 per cent if the deposits belong to the state itself) of the combined capital and surplus of such bank In the case of Bowman County vs McIntyre, 202 N W 651, the State Supreme Court held on January 10, 1925, that a deposit by a county treasurer in a bank in excess of the amount of depository bonds constituted a breach of his official bond issued by the State Bonding Fund This claim had not yet been paid at the time the 1926 report of the Fund was published. Since it arose under the previous depository law (of 1921) rather than the amended act of 1923, there may be a question as to the fund's liability for similar cases arising under the later measure The final outcome can only be determined by court action

Under Sec 9013, South Dakota's Revised Banking Code of 1919, banks which had fully complied with all provisions of the bank guaranty act were not required to give any further security or bond for the purpose of being a depository of public funds Other laws did, however, regulate the amount which could be deposited in any one bank and required banks which were not members of the fund to furnish satisfactory bonds Chapters 281, 295 and 236, Session Laws of 1925, dealing with state, county and municipal deposits respectively, required that each depository of public money furnish a good and sufficient surety bond, or in lieu thereof, deposit approved securities. Deposits of county funds in any one bank were further limited to 100 per cent of the capital and surplus of such bank. Chapter 281 specifically excluded state funds from the protection of the State Guaranty Fund although nothing was said in the other laws with respect thereto As the Legislature attempted to repeal the bank guaranty law the same year, its intent apparently was that public moneys other than those belonging to the state would not in the future be covered by the

secured by corporate surety bonds or approved securities has given rise to a very serious problem in the light of recent bank failures, the results of which have already been discussed in connection with bank guaranty funds In brief, the question has arisen whether the fund shall be liable on the bond of an official who has failed to exact the necessary security from his depository or who has deposited funds in excess of the amount to which they are secured. The North Dakota fund was held liable for such a loss in 1923, the amount of which, $56,954.51 was $10,000 greater than the fund's gross income for the year. Both funds are now denying liability for and contesting such cases [13] Under the coverage supposed to be afforded by public official bonds, their position would seem to be untenable.[14]

bank guaranty fund Repudiation of that repeal at the referendum in 1926 raises the question whether the new depository law of 1925 has by implication repealed the parts of the guaranty law inconsistent therewith.

[13] *North Dakota*—Extracts from 1926 Report of State Bonding Department, pages 9 and 10.

"From July 1919 to November 1920 the department had no liability on bonds of custodians of public moneys through the depositing of such fund for the reason that the Bank of North Dakota was a bonded depository by law and all moneys belonging to the political subdivisions were compelled by law to be deposited therein In November 1920 a measure was initiated amending the Bank Act so as to leave it optional with the custodians of public moneys with the exception of state treasurer as to where they should deposit such money On and after that date wholesale withdrawals took place, taking their money from bonded security and again placing it on deposit in local banks without any security whatever in many cases Many of these same political subdivisions compelled the Bank of North Dakota to pay them in full notwithstanding the fact that the Bank of North Dakota had not been able to recover on their local bank for its redeposits. Many of the political subdivisions were so extremely anxious to take their funds from the state bank that they went to the extreme measure of garnishing said bank for the amount of their deposit Every political subdivision that wanted to withdraw got their money in due time—only in many cases to have it lost or tied up in their local depository as they began to close their doors in rapid succession

"The Bonding Department served warning after warning to the political subdivisions that extreme care should be exercised in depositing public funds in private banks and recommended in all cases that depository bonds be obtained, especially recommending corporate surety bonds. The political situation at that time was not conducive to calm deliberation on the subject and our efforts were only rewarded in many cases by a short curt note that recommendations were not wanted, it being taken for granted that our recommendations had a political significance On the other hand many honest public officials were led to believe that their deposits in private banks were protected under the State Guaranty Fund, only later to find that such was not the case.

"As the political subdivisions came face to face with the situation of having their money tied up in closed private banks, the officials began to look around for an excuse and consequently tried to place the burden on

In this connection, it is of interest to analyze the disposition of claims. Of the 146 claims filed against the North Dakota fund up to July 14, 1926, 17 were settled by payment, 46 were adjusted without loss to the fund, 43 were disapproved either on the ground that they weren't filed within the time limit specified by law (claim must be made immediately upon and in no event more than 60 days after discovery of wrongful act) or that the fund's liability had not been definitely established, and 38 are still pending. Eight of the nine claims rejected because of delay in filing totalled more than $17,000 and thirty-two of the thirty-eight claims still pending aggregated almost $397,000. The amounts of those not included in the foregoing totals were not ascertainable. Some of the pending claims run back as far as 1923. Statistics as to the disposition of claims in South Dakota could not be secured.

Financial Status

From its inception until August, 1926, the North Dakota fund received in gross income $399,228.24. Of this sum, $365,814 72 was from premiums, $32,451.30 from interest and $962 22 from miscellaneous sources. Total disbursements for the same period were $175,524.63, including $102,908.34 for losses, $28,784.25 for reinsurance and $43,832.04 for op-

the State Bonding Fund. While the department had no desire to evade true and just claims, neither did we believe it proper that a political subdivision be reimbursed from the department for losses as a result of their own acts and especially when their deposits in private banks were made over the protest of the department Practically all of these claims filed with the department have been rejected and wherever they have been prosecuted the department's contention has been sustained by the courts with very few exceptions"

South Dakota—Excerpt from letter of G. H. Helgerson, Commissioner of Insurance, dated January 3, 1927. "The matter of whether or not the Bonding Department is liable for money lost in closed banks is one which has not been determined definitely as yet, there being a case pending in Supreme Court at the present time relative thereto"

[14] In a letter to the author commenting upon the situation in the Dakotas, the Vice-President of a leading American bonding company says, "It is our belief in most jurisdictions a public official, such as a treasurer, can be held liable under his official bond in the event he makes deposits in excess of the amount for which the bank may have qualified under the depository law. That is the usual plan under which we operate and where it comes to our attention that, say, a county treasurer, from any report we may secure on his office, has deposits in excess of the depository bonds or collateral furnished, we immediately take up the question of securing additional protection"

erating costs. The net income accordingly, was $223,703.61, from which unearned premiums of $34,238 40 must be deducted to find the surplus Were adequate allowance made for the pending claims aforementioned and for possible suits on disapproved claims, this surplus of $189,465 21 would surely be reduced and possibly eliminated Total bonds issued have exceeded $34,000,000 and those now in force approximate half that amount.

Throughout its existence prior to June 30, 1926, the South Dakota fund received gross income of $75,116 22 from operations and an appropriation of $25,000 from the state Of this it has disbursed $32,988.46, leaving a net surplus of $67,127 76 Here again should due consideration be given to unpaid claims in order to measure properly the true financial condition. Total bonds issued amounted to $15,607,200 in 1926, of which about 40 per cent were then still in force.

State Liability for Solvency

The North Dakota act neither denies nor assumes any responsibility by the state for its fund's solvency, whereas that of South Dakota, while appropriating $25,000 as a revolving fund, which amount does not revert, specifically asserts "no judgment shall ever be entered against the state, for it is the true intent and meaning of this act that the state shall incur no actual liability, and all losses shall be paid out of the funds accruing to the state bonding department from premiums paid."

WISCONSIN DOG-BITE INSURANCE FUND

In replying to an inquiry with respect to the various state insurance funds existent in Wisconsin, the Commissioner of Insurance writes as follows.[15] "There is also what possibly may be called the 'State Dog-bite Insurance Fund'; this being an accumulation of dog-license fees, out of which fund indemnity is allowed by the counties to the owners of domestic animals on account of damages by dogs; the amount allowed not exceeding $100 for each horse, mule or bovine, $30 for

[15] Letter of M. A. Freedy, Wisconsin Commissioner of Insurance, dated February 4, 1927

each sheep, goat or swine, or \$3 for each fowl, nor more than 80 per cent of claim—the full amount being paid where there is conclusive evidence of ownership of dog, in which case there is subrogation to the county so that action against the owner may be brought for recovery.

"During 1925, the payments and accumulations of the fund amounted to \$166,000. A total of \$50,000 was paid during the year, during which time dogs bit 5,000 sheep, 30 goats, 100 cattle, 300 hogs and 6,000 chickens"[16]

[16] Mr. Freedy further adds. "No doubt some erudite promoter of this law dug down into the musty records of the past and in the laws of Athelstan (925–940 A D.) found reference to cattle insurance at that time where each member of the community, under a mutual form of cattle insurance, was required to become a contributor to the extent of one penny in order to repay the owner for the loss of the animal"

CHAPTER XVI

GENERAL CONCLUSIONS

At the outset of this inquiry, attention was called to the fundamental character of the relationship between the state, as a governmental body, and the institution of insurance. It was then noted how in comparatively recent years there has been a deviation from the original concept that the state's function should consist in the exercise of purely regulatory and supervisory powers, and that this deviation has been in the direction of the creation and operation by the state of numerous and varied insurance enterprises Throughout the intervening pages, the funds thus established have been viewed from many angles And now, in this final chapter, the conclusions to which the facts presented lead will be summarized briefly.

Owing to dissimilarities in the aims, practices and financial status of certain funds, a general statement may not suffice in all cases to characterize state operation When such is the case, suitable qualification will be made. For a detailed discussion of any particular fund, or kind of fund, however, reference must be made to the chapter in which it is treated.

TYPES OF FUNDS

On the basis of the connection between the state and the insured, two classes of funds may be differentiated. The first class comprises the teachers' retirement, state employees' retirement, public deposits guaranty, public property insurance and public official bonding funds In certain of these, the state or its political subdivisions are protected against loss, whereas in others, individuals associated with the state government or its public school system are provided with pensions as rewards for faithful service. All are essentially self-insurance propositions. The second group includes the other funds discussed, which are designed to render available to the general public various forms

of insurance coverage that, in most cases, would otherwise have been purchaseable from private carriers. These funds either compete with private companies for their business, or, by legislative fiat, enjoy a monopoly. A tendency for proponents of state fund insurance to urge the conversion of competitive into monopolistic agencies is quite noticeable. Though not admittedly so, one reason behind the advocacy of monopoly appears to be the fear that competitive funds will never expand much in size, but on the contrary, may dwindle away

Relative Importance of State Insurance

As compared with more than five billions of dollars received in premiums during 1926 by regularly authorized private insurance carriers, the eighty-five million dollar gross combined income of the funds seems very small. But on the other hand, note should be made of the fact that funds in the second group named wrote more than one-sixth of the workmen's compensation insurance and almost that proportion of the hail insurance premiums

Nature of Coverage

When a fund is created primarily for the purpose of self-insurance, the coverage afforded is ordinarily that which the state legislature deems most suitable to its needs It is difficult, therefore, to make any comparisons with the contracts available from private carriers In cases where the public has an option of obtaining a particular form of insurance protection from either the state or a private company, the terms of the coverage supplied by the latter are usually more liberal and permit of greater flexibility as respects adaptation to the needs of the insured. This is particularly true in the case of workmen's compensation and hail insurance contracts.

Administration

Practically all funds are administered by elected or appointed state officials, most of whom have had no previous insurance training or experience. The turnover among executives is

high, and the salary scales of the funds requiring the greatest technical ability, namely, those writing workmen's compensation coverage, are low. There is no reason to think any other type offers more substantial pecuniary inducement to competent employees Many funds are managed by officials whose main duties fall in some other field of state activity. The dual functions of some compensation fund administrators are incompatible, and decidedly to be deplored.

The participation of policyholders in the management of funds is not general but is more common in the case of teachers' actuarial retirement, state employees' retirement, and bank guaranty funds. Only two compensation insurance funds have adopted the practice. An extension of this idea would appear to have merit

State funds are usually not subject to the jurisdiction of the state insurance department nor to the statutory and departmental regulations applicable to private companies. It is especially regrettable that frequently they are not required to meet the same standards of solvency. The interests of the public would be promoted if state funds were placed on the same regulatory plane as other insurers, and if data regarding their operations were incorporated in the annual insurance reports of each state.

Payment of Claims

There has been pro-rating of claims and slowness of settlement in the case of hail insurance and bank guaranty funds. Evidence has also been advanced to indicate delays and underpayment of workmen's compensation claims, but it is not conclusive The influence of governmental red tape in all can not be ignored.

Loss Prevention

Activities designed to prevent loss in the first instance have been almost generally neglected by the funds although efforts of this kind would doubtless have resulted most beneficially. Neglect of such was at least partly responsible for the exceptionally heavy losses sustained by the bank guaranty funds

The most constructive work among all funds is now being carried on by several competitive compensation insurance funds which have been stimulated by the rivalry of private concerns. Loss prevention is coming more and more to be recognized as an integral part of the insurance service which a progressive private carrier may render, but its ultimate monetary savings cannot be foretold accurately, and expenditures for it are difficult to justify to a legislative committee, thus tending to hamper those fund officials who recognize its worth.

Rating

Methods of rating are largely empirical, and the rates produced by them in many instances are very rough approximations of the real cost. Competitive compensation insurance funds, teachers' actuarial and state employees' retirement funds, public property insurance funds utilizing board rates, and life insurance funds constitute the principal exceptions The rating systems of hail insurance funds have been much improved recently. Where any consistent attempt is exerted to place rating upon a sound base, private company methods are ordinarily adopted.

Rates have not always been adequate The experience of two compensation insurance funds, of all hail insurance and bank guaranty funds, and of teachers' cash disbursements pension funds are the outstanding illustrations of state insurance enterprises which bear mute testimony to that fact.

Although not general, some monopolistic workmen's compensation and both automatic hail insurance funds show indications of gross inequities in rating Rank discrimination in favor of influential industries is clearly apparent in two of the monopolistic compensation insurance funds

Comparative Costs

Where comparable data may be secured, it is usually found that the net rates for insurance written by state funds are somewhat lower than those for private stock insurance companies. This is attributable in part to the fact that all or a share of the

administrative expenses is borne by the public, in the case of most funds, either by an outright appropriation, or by the furnishing of quarters, stationery and supplies, or free legal and investment advice Even when the state does not supply the means for paying operating expenses, it may restrict the amount which can be expended for them Attention has already been directed to certain funds whose officials complain of their inability to provide many necessary services because of some legislative limitation upon their expenditures.

All but two compensation funds and the Massachusetts Savings Bank Life Insurance System are indirectly subsidized by freedom from the taxation—whether federal, state or local—to which regular companies are subject The curtailment or elimination of many collateral services, such as inspection, adjusting and loss prevention, customarily rendered by private carriers, is responsible also for a substantial share of the difference in net rates. Perhaps the greatest single difference, however, arises from the fact that the acquisition cost for the funds as a whole is practically negligible To consider this a pure saving to the policyholder is erroneous, for the ready availability of a company representative to explain the forms of insurance, to adapt the coverage to circumstances, to be on the lookout for changing needs, and to counsel the insured generally with respect to insurance, is of value, as is continually being demonstrated by many policyholders who, when given a choice in the matter, pay the higher costs in order to get the better service

The contentions of state fund advocates as to the extent of savings to policyholders are greatly exaggerated They, of course, attribute differences to economies of operation and never to claim paring. As a matter of fact, when service factors are taken into account, it has been demonstrated for competitive compensation insurance funds, and could doubtless be shown likewise for others, that a well-managed state fund would be on about the same basis with respect to costs of operation as a well-managed mutual Comparisons of expense ratios should always recognize that expenditures are a

measure of the service which a policyholder receives as well as a measure of the cost to him.

FINANCIAL STABILITY

Some funds, as the hail insurance, bank guaranty and public deposits guaranty funds, are confined to territories too limited to assure a distribution of risk. Their only hope of financial stability would depend upon reinsurance or the establishment of huge surpluses, inasmuch as a fund can not spread its risk by writing business outside of its home state. But they have not been safeguarded in this manner. Many other funds have ignored the necessity for reinsurance and their surpluses afford but a small margin of safety. Some, however, are on a firm financial foundation, and show every sign of being financially healthy

Restrictions on classes of investments are of a kind to prevent speculation with assets, and err, if at all, on the side of conservatism

STATE LIABILITY FOR SOLVENCY

In the enabling acts bringing the funds into being, some states have specifically denied any liability on their part for financial deficiencies Others are silent on the point whereas a relatively few provide for state assistance in the event of such an emergency.

Unless responsibility for the financial welfare of a fund is definitely assumed by law, it may be accepted as a general proposition that the state will not meet any deficits. Of course, when the fund is operated for the protection of state property only, any shortage must ultimately be borne by the state so it makes no difference whether or not such a provision is incorporated in the law. But when political subdivisions, or teachers, state employees, workmen's compensation and hail insurance policyholders, bank depositors, and other members of the general public are involved, it is a matter of great concern. The precedent seems to be firmly set, however, by the failure of any state to come to the rescue of a workmen's com-

pensation, bank guaranty or hail insurance fund which has gotten into financial straits

To the average individual, state insurance implies a guarantee from the state that all obligations will be fully met. Many persons have been misled by a blind faith in this belief. In fairness to others who would be affected by insolvency, every effort should be made to inform each one clearly just what the state's position would be in such an event. Surely, the practice of leaving them under the impression that the state will stand behind the fund, when no such guarantee is intended, should be severely condemned.

In General

If funds, which are essentially self-insurance propositions, are competently managed, scientifically financed and properly supervised, they should be no more open to attack on the ground that the state is invading the domain of private enterprise, than would be similar systems operated by a large industrial corporation. If not conducted in accord with sound insurance principles, or if the political character of the state government peculiarly unfits it to provide an insurance service, then may these funds be subjected to criticism and the wisdom of their establishment questioned. Upon such grounds rest our criticisms of teachers' cash disbursements pension funds, public deposits guaranty funds, public official bonding funds, and public property insurance funds operating on the emergency reserve appropriations plan.

If it be correct to assert that the functions of government should be confined to the rendering of those services for the public welfare which can not be performed equally well under private initiative, then state insurance funds which essay to write coverage that would otherwise have been secured from private sources, must demonstrate that they can furnish a better and more satisfactory form of service than that elsewhere available. And the best proof that they are doing so lies in a comparison of their achievements with those of private rivals who are operating on the same plane. If superiority can not

be conclusively proven under such circumstances, there is little reason to believe any better results would be secured by a monopoly. No satisfactory proof of superiority has yet been advanced, so all that fund proponents can logically expect is that competitive funds be permitted to operate alongside of private carriers, thus giving to each an opportunity to demonstrate its excellence.

The necessity for and desirability of monopolies in the field of insurance have never been demonstrated, and no facts developed by this investigation would at all warrant the establishment of monopolistic state funds for any purpose other than self-insurance They have been fairly tried, and through experience have been found to be less flexible in their response to changing economic conditions, less scientific in their methods, and less progressive in their ideals and services than are private carriers. Competition, sanely regulated, has been the lifeblood of insurance development in the past. It is the surest pledge of advancement for the future.

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